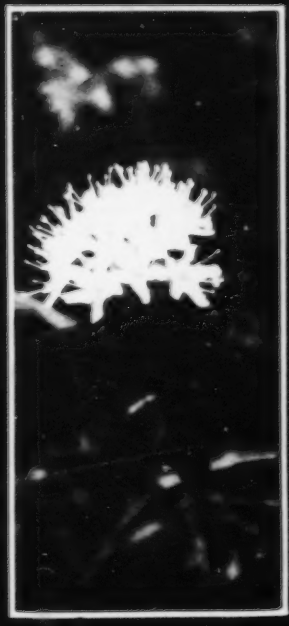
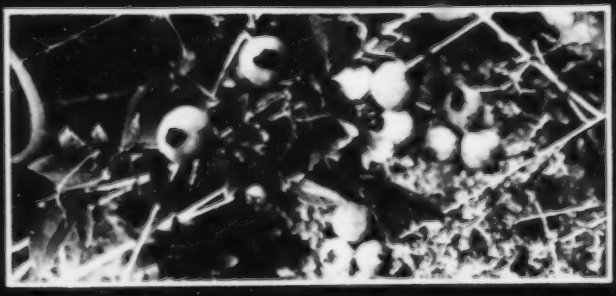
NATIVE

TREES AND SHRUBS

OF NEWFOUNDLAND AND LABRADOR

BY A. GLEN RYAN





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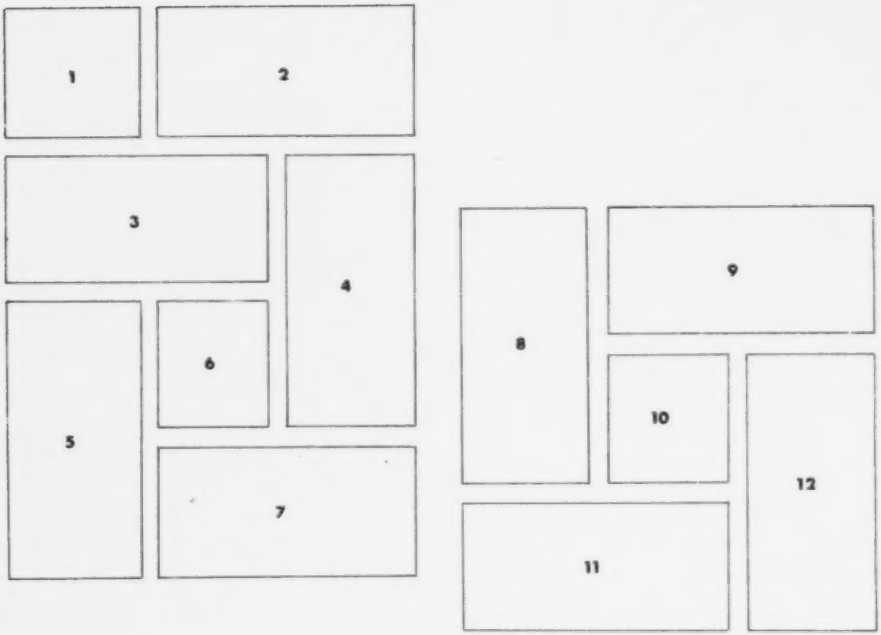

1. Northern Honeysuckle, *Lonicera villosa*
2. Pin Cherry, *Prunus pensylvanica*
3. Red Raspberry, *Rubus idaeus*
4. Lambkill, *Kalmia angustifolia*
5. Pin Cherry, *Prunus pensylvanica*
6. Larch, *Larix laricina*
7. Highbush Cranberry, *Viburnum trilobum*
8. Squashberry, *Viburnum edule*
9. White Birch, *Betula papyrifera*
10. White Spruce, *Picea glauca*
11. Low Sweet Blueberry, *Vaccinium angustifolium*
12. Labrador Tea, *Ledum groenlandicum*

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NATIVE

TREES AND SHRUBS

OF NEWFOUNDLAND AND LABRADOR

Text and illustrations by

A. Glen Ryan

Parks Division
Department of Tourism
Government of Newfoundland and Labrador
St. John's, 1978

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Thanks are also due to those who helped type the manuscript.

A. Glen Ryan

St. John's
Newfoundland
March, 1978

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INTRODUCTION

This is an illustrated guide to the trees and shrubs indigenous to Newfoundland and Labrador. Illustrations and descriptions are provided for about one hundred species and four genera of woody plants. Because of the difficulties in identifying the Willows, Chuckley-pears, Blackberries, and Hawthorns, only descriptions of these groups and lists of the species recorded from our area are given. A few introduced species are included to avoid confusion with similar native species. Much of the material originally appeared in the author's *Shrubs of Newfoundland* published in 1974. That edition included about seventy-five species and five genera of shrubs found in the insular part of the province.

In compiling this book frequent reference was made to already published material. But this was inadequate. A considerable amount of original field work and examination of herbarium specimens had to be done to make the study complete. When examining local specimens it was often found that they differed somewhat from descriptions given in many identification guides. The descriptions are, therefore, of the species as they commonly occur in the area considered. One should always bear in mind that variations do exist within each species.

The flowering and fruiting dates were obtained from field observations and herbarium specimens. They are approximate and may vary somewhat throughout the area covered. Usually a species blooms later in Labrador than it does in insular Newfoundland, and on the island a species usually blooms earlier on the West Coast than on the East Coast.

The distributions were determined mostly from herbarium specimens and published records. In some cases the distributions may be incomplete. There are still some parts of the province that are in need of botanical exploration, notably the south coast of Newfoundland and parts of Labrador.

Both scientific and common names are given for nearly all the species. The scientific names for the most part are those used in *Gray's Manual of Botany*, Eight Edition. Any differences are the result of new studies or the adoption of more widely used names. The common names are from several sources but many of them are from *A Field Guide to Trees and Shrubs*.

The descriptions are as non-technical as possible, and botanical terms are used only when deemed convenient or necessary. A glossary is provided and many of the terms are illustrated.

The illustrations were done mostly from freshly gathered material and photographs. In the case of rarer species, herbarium specimens were used. The drawings present diagnostic features of the species and are meant to complement the text.

All measurements are given in metric units which are abbreviated as follows: millimeters (mm), centimeters (cm), and meters(m). A scale on the

inside back cover can be used to convert centimeters and millimeters into inches.

Very little equipment is necessary to identify trees and shrubs. A hand lens or magnifying glass of 6 to 10 power is useful for looking at twig characteristics, flower structures, and the surfaces of leaves.

A key follows, dividing the trees and shrubs into sixteen groups based largely on leaf characteristics. The key is dichotomous, giving two alternatives at each step from which to choose. First, there are two basic leaf types — leaves linear, needlelike, or scalelike, and leaves broad and flat. The first alternative is further divided on the basis of plant habit. The second alternative, which includes most of the species in the book, is further divided into other groups based on the habit of the plants, the leaf shape, and whether they are evergreen or deciduous. The page numbers opposite each group indicate where they are found in the book.

When identifying a specimen it is often necessary to use a combination of characteristics. One should look at the twigs, bark, buds and leaves, the flowers and fruit, the growth habit of the plant, and compare them with the descriptions given.

In winter, broad-leaved species without leaves can be classified by observing the position of the buds, whether they are opposite or alternate. If the buds are opposite or alternate, then so are the leaves. With the exception of the Larch, the plants with needlelike leaves remain green throughout the year. Many broad-leaved species are also evergreen, presenting no problem for identification.

It is somewhat difficult to properly define a tree or a shrub. A widely used definition refers to a shrub as a perennial woody plant having more than one stem and under 3 meters tall. Any woody plant over three meters tall and having one stem or trunk is then considered a tree. These definitions are, however, somewhat arbitrary since some woody plants can be considered as both trees and shrubs. Some shrubs may have only a single stem whereas there are trees which commonly have several trunks.

It is equally difficult to demarcate between herbaceous and woody plants. Some creeping and mat-forming plants are intermediate between the two. These so-called "semiwoody" plants or "sub-shrubs" have stems which are partly woody, especially towards the base. And, too, they are perennial.

This book then includes woody plants considered as trees and shrubs and some of the "sub-shrubs."

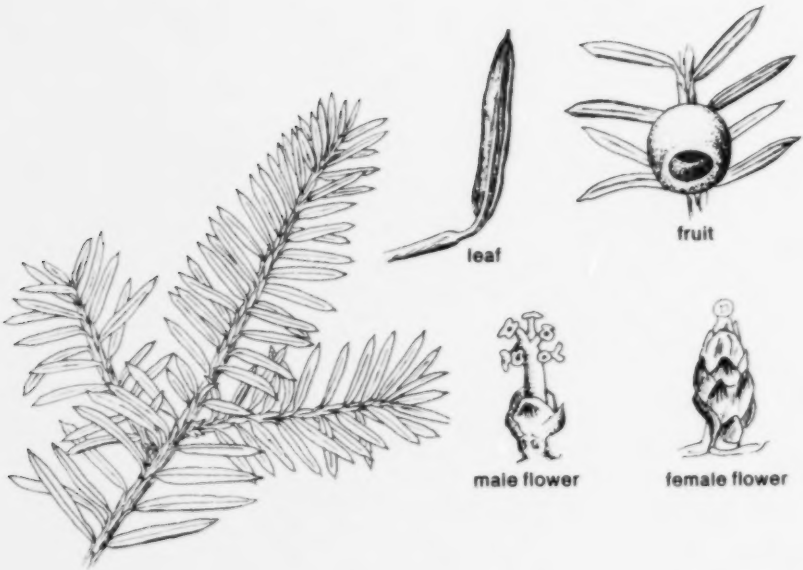
If this guide can help one to identify more accurately the trees and shrubs of Newfoundland and Labrador and to know them better, then it will have achieved its purpose.

LEAF KEY

1. Plants with leaves linear, needlelike, or scalelike, evergreen or deciduous
   2. Shrubs 5-13
   2. Trees 14-20
1. Plants with leaves broad and flat
   3. Leaves oposite
      4. Branches trailing, matted or trufted, evergreen 21-23
      4. Branches erect
         5. Leaves simple
            6. Lobed, deciduous
               7. Shrubs 24-26
               7. Trees 27
            6. Unlobed
               8. Evergreen shrubs 28-29
               8. Deciduous shrubs 30-34
         5. Leaves pinnately compound, deciduous 35-36
   3. Leaves alternate
      9. Branches trailing, matted or tufted
         10. Evergreen 37-44
         10. Deciduous 45

(see also page 57)

      9. Branches erect
         11. Leaves simple
            12. Lobed, deciduous 46-50
            12. Unlobed
               13. Evergreen shrubs 51-54
               13. Deciduous
                  14. Shrubs 55-83
                  14. Trees 84-91
         11. Leaves compound, deciduous
            15. Trees 92-94
            15. Shrubs 95-99



CANADIAN YEW, *Taxus canadensis* Marsh.
Taxaceae

A straggling evergreen shrub, usually less than 1.5 m high and often forming patches or colonies. Twigs are smooth and rather flexible. Winter buds consist of many overlapping and sharp-pointed greenish scales.

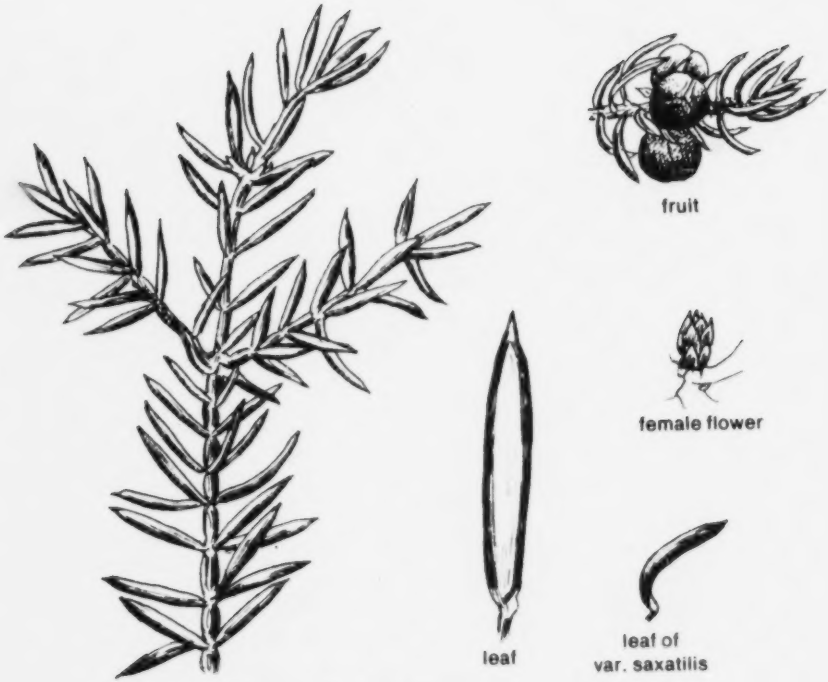
Leaves are flat, linear or needle-like, and sharp-pointed, generally under 2.5 cm long. They are dark green and shiny above and yellowish-green beneath. The midrib is prominent on both surfaces. The leaves also have distinct stalks that are narrow at the base and extend down the twig a distance. The leaves are spirally arranged around the twig but the stalks are twisted so as to form a flat spray.

Flowers are small and borne singly in the leaf axils. Male flowers are a stalked cluster of stamens; female flowers are erect, green, scaly structures. The sexes are usually on the same plant. The flowers are present throughout the spring, usually blooming in May.

Fruit are cup-like, bright red waxy structures (arils) that contain a single dark green seed. Ripen in August. The fleshy red portion of the fruit is edible but the seed is poisonous.

Found in moist coniferous woods, at the edge of bogs and along stream banks throughout Newfoundland. It has not been recorded from Labrador.

This shrub is locally called 'palm' and is sometimes used to decorate the kitchen table on Palm Sunday.



COMMON JUNIPER

TRAILING JUNIPER

COMMON JUNIPER, *Juniperus communis* L.
Pinaceae

A depressed or sprawling evergreen shrub up to 1.5 m high, forming broad patches. Young twigs are smooth, greenish and ridged. Older branches are brown with scaly bark.

Leaves are in whorls of three and crowded on the stem. They are sharp-pointed, needle-like, and 1 - 2 cm long. The uppersurface (concave and towards the stem) has a broad whitish stripe down the middle, bordered by green margins whereas the undersurface is green and shiny.

Flowers are in the leaf axils with the male and female flowers usually on different plants. Male flowers are catkin-like, 2 - 4 mm long; female flowers are oval-shaped, about 1 mm long, and consist of 3 - 8 small pointed scales. Blooms from mid-May to mid-June.

Fruit are fleshy and aromatic berry-like cones, blue-back and covered with a whitish bloom, edible, about 6 mm in diameter, and have 1 - 3 seeds. It takes three years for the fruit to mature.

Found in dry woods and old fields, on peatlands and rocky hillsides, heaths and other exposed habitats, throughout Newfoundland and southern Labrador.

There are three varieties:

Var. *depressa* Pursh forms large reclining mats up to 1.5 m high. Leaves are 8 - 18 mm long, straight and sharp-pointed. Fruit are 6 - 10 mm in diameter. This is the most common variety in our area.

Var. *saxatilis* Pallas is depressed and trailing. Leaves are 6 - 9 mm long, broad, and curved with short points. Fruit are 6 - 9 mm in diameter.

Var. *megistocarpa* Fern. & St. John is similar to *saxatilis.* The fruit, however, are 9 - 13 mm in diameter. Recorded only from western Newfoundland.

TRAILING JUNIPER, *Juniperus horizontalis* Moench

A prostrate and mat-forming evergreen shrub with long-trailing stems. Older branches have scaly bark.

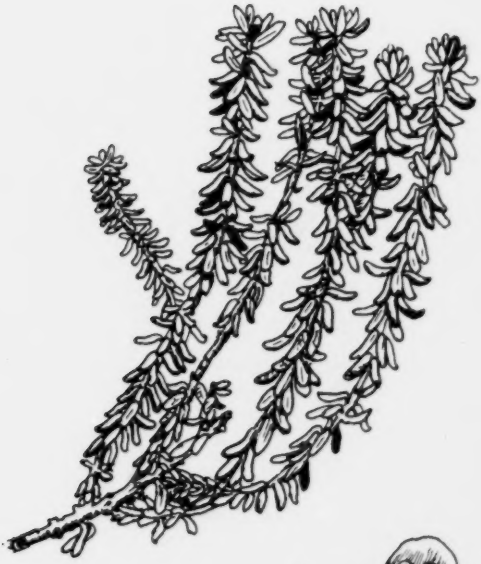
Leaves are opposite, forming four rows on the stem, scale-like and overlapping, and sharp-pointed.

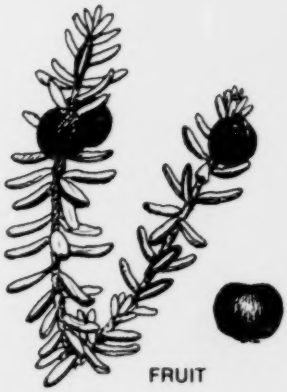
Flowers are at the ends of the short branches and are similar to those of Common Juniper. The male and female flowers are on separate plants. Blooms from mid-May to June.

Fruit are bluish, berry-like cones, 6 - 10 mm in diameter, with 3 - 5 seeds, and are on short recurved stalks. They mature in 2 or 3 years.

Found on rocky headlands, peatlands, and in rocky open woods throughout Newfoundland. There are no records of its occurrence in Labrador.

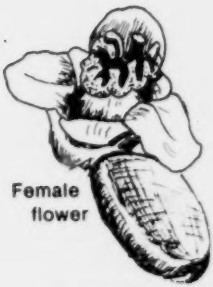
Juniper fruit are available year-round and can be used as a nibble or for seasoning.





FRUIT

leaves

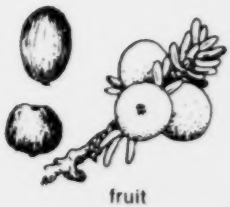


Female
flower

male flower

BLACK CROWBERRY

leaves



fruit

PINK CROWBERRY

fruit of
PURPLE CROWBERRY

BLACK CROWBERRY, *Empetrum nigrum* L.
Empetraceae

A mat-forming evergreen shrub. Young branchlets are essentially hairless and shiny but may have minute glandular hairs. Older branches are reddish-brown and flaky.

Leaves are alternate, 3-7 mm long, crowded on the stem, linear to narrowly elliptic, somewhat sharp-pointed, and smooth except for the edges which usually have short, glandular-tipped hairs. The leaf margins are strongly revolute, nearly meeting beneath to form a white groove. The lower leaves are usually dry and brown.

Flowers are small and inconspicuous, about 2 mm across, and in the axils of the upper leaves. There are usually male and female flowers on separate plants but the flowers may be perfect. There are 3 sepals and 3 purplish petals. The 3 stamens are long and have dark purple anthers. Blooms from about the third week of April to late May.

Fruit are juicy, dull black, subglobose to globose drupes, 5-10 mm in diameter and have 6-11 nutlets. Ripen by late July and often remain on the bush throughout the winter.

Common around coastal areas, on barren and rocky soils, as well as in bogs and wooded areas throughout Newfoundland and Labrador.

PINK CROWBERRY, *Empetrum eamesii* Fern. & Wieg.

Similar in habit to *E. nigrum* but usually lower and more compact. The young branchlets are densely covered with white hairs.

Leaves are oval to oblong-elliptic, 2.5 - 4 mm long, usually rounded at the tip, and with sparse hairs on the margin that usually fall off early. The margins are strongly revolute, nearly meeting beneath to form a white groove.

Flowers are similar to those of *E. nigrum*. According to Löve (1960) the flowers are mostly bisexual; however, I have found that on the Avalon Peninsula male and female flowers occur on separate plants. Blooms from late April into May.

Fruit are pink or red, shiny, translucent, 5-9 mm in diameter, and usually globose in shape.

Found throughout Newfoundland and in southeast Labrador. It is not nearly as common as *E. nigrum*. Prefers dry, exposed habitats — hill summits, rocky ledges, and dry heaths.

PURPLE CROWBERRY, *Empetrum atropurpureum* Fern. & Wieg.

Mat-forming but the growth is more loose and trailing than in either of the other two species. Twigs are densely covered with white hairs.

Leaves are bluish-green, 4-6 mm long, linear-oblong, and have hairy margins.

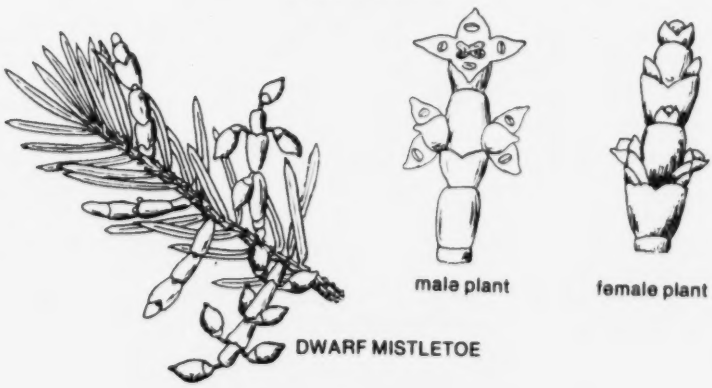
Flowers are like those of *E. nigrum*. Both sexes are usually in the same flower.

Fruit are dark red to plum-purple, with a bloom, opaque, ovoid in shape, and mostly 8-9 mm in diameter.

Found in exposed habitats — rocky ledges, hilltops, and coastal heaths. The author has found several plants of this species at Birchy Cove, Bonavista Bay, where it grows along with *E. nigrum*. This is the only known locality for it on the island of Newfoundland but apparently it occurs in the extreme southern part of Labrador.

GOLDEN HEATHER

BEACH HEATHER



male plant

female plant

DWARF MISTLETOE

GOLDEN HEATHER, *Hudsonia ericoides* L.
Cistaceae

A mat-forming, evergreen, moss-like shrub, 5 - 7 cm high.

Leaves are alternate, needle-like, slender and tapering to a sharp point, about 5 mm long, greenish but covered with long, thin hairs. The leaves are persistent and spread from the stem.

Flowers are bright yellow, crowded on the upper branches and are usually numerous. They are 8 - 10 mm across and are on distinct stalks. Each has 5 petals and the ovary is hairy. Blooms in June.

Fruit are small, cylindrical, few-seeded, dry capsules on distinct stalks.

Found in rocky, exposed habitats on the northeast, southeast, and south coasts of Newfoundland.

BEACH HEATHER, *Hudsonia tomentosa* Nutt.

Similar to Golden Heather. Leaves are more scale-like and overlapping on the stem, and 2 - 3 mm long, with the surface almost completely covered by thick whitish hairs. Flowers are sulphur-yellow and on very short stalks. The ovary is usually hairless.

This species has not been recorded from insular Newfoundland but has been found in southern Labrador. It prefers sandy areas and beaches.

DWARF MISTLETOE, *Arceuthobium pusillum* Peck
Loranthaceae

A very small and inconspicuous shrub, 0.5 - 2 cm high, parasitic on conifers. Stems emerge from the host, are greenish-yellow to purplish and often much-branched. Leaves are opposite and scale-like.

Flowers are solitary in the leaf axils with the male and female on different branches of the same tree or on separate trees. The calyx is 3 or 4-parted. Blooms in June.

Fruit are elliptical, olive or brown, translucent drupes, 2 - 3 mm long, on a short recurved stalk. The single seed is shot out explosively from the drupe at the time of maturity in autumn.

It has been found growing on Black Spruce, *Picea mariana* (Mill.) B.S.P. in western and central Newfoundland.

MOSS HEATHER

Fruit

leaf

fruit

leaf

ARCTIC WHITE-HEATHER

MOUNTAIN HEATH

leaf

fruit

MOSS HEATHER, *Cassiope hypnoides* (L.) D. Don
Ericaceae

A tufted, evergreen, moss-like shrub, 1 - 7 cm high.

Leaves are needle-like, sharp-pointed, 2 - 4 mm long and loosely overlapping on the stem.

Flowers are white or rose-colored, 4 - 5 mm across, nodding and bell-shaped with 5 petals. They are solitary, on erect, slender, soft-hairy stalks at the ends of the branches. The calyx and flower stalk are wine-red in color. Blooms in late June and July.

Fruit are small, dry, many-seeded, globe-shaped capsules, 3 - 4 mm long.

Found in alpine areas of western Newfoundland, the Great Northern Peninsula and Labrador.

ARCTIC WHITE-HEATHER, *Cassiope tetragona* (L.) D. Don

A course, dwarf, evergreen shrub, 5 - 8 cm high, larger overall than Moss Heather.

Leaves are lanceolate, thick, with the margins rolled to the upper side, and 3 - 4 mm long. The undersurface and margins are fine-hairy. The leaves are arranged in 4 rows on the stem.

Flowers are slightly larger than those of Moss Heather and are on smooth and hairless stalks. The calyx and flower stalk are yellowish-green in color. Blooms in July. The fruit is like that of Moss Heather.

An Arctic species found in northern Labrador.

MOUNTAIN HEATH, *Phyllodoce caerulea* (L.) Bab.
Ericaceae

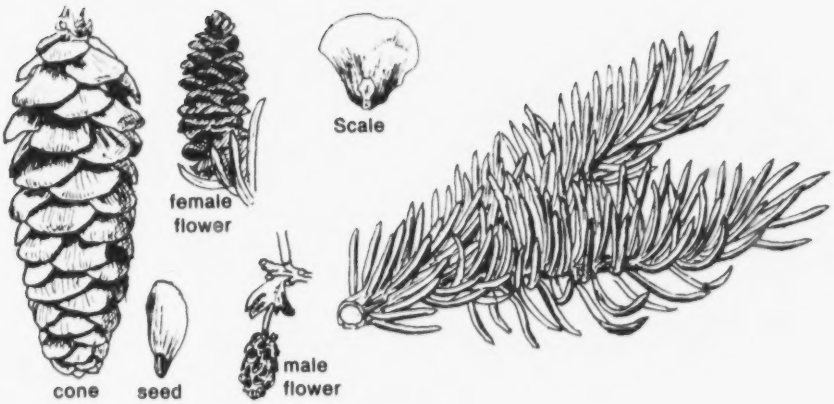
An evergreen shrub 8 - 15 cm high. Twigs are rough, covered with persistent spirally arranged leaf bases.

Leaves are alternate, linear, flattened, blunt-tipped, dark green and shiny above, 6 - 12 mm long, and crowded towards the ends of the branches. The margins are minutely toothed. The undersurface has a conspicuous whitened midrib. The needle bases follow down the stem for a short distance.

Flowers are nodding and urn-shaped, solitary or in few-flowered clusters, on slender reddish stalks at the ends of the branches. The corolla is purplish, 7 - 8 mm long, and 5 lobed. Blooms in June.

Fruit are 5-parted, many-seeded, dry, red capsules on erect stalks.

Found on cliffs and the slopes and summits of mountains of western Newfoundland, the Great Northern Peninsula, and Labrador.



WHITE SPRUCE, *Picea glauca* (Moench) Voss
Pinaceae

An evergreen coniferous tree that may reach 25 m in height but is usually less than 15 m high, with a straight tapering trunk and uniform conical crown. In exposed habitats, such as in coastal areas, it is often gnarled and irregular in shape. Twigs are light reddish-brown, hairless and shiny, and when devoid of leaves are covered with peg-like leaf bases. Older branches are grayish-brown. Buds are hairless and slightly rounded. The pointed outer bud scales do not project beyond the tip of the bud. Bark is grayish-brown and scaly.

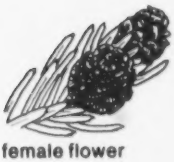
Leaves are needle-shaped, stiff and sharp-pointed, shiny, 4-sided in cross-section, yellow-green to blue-green, often covered with a whitish bloom, and 0.5 - 2 cm long. They are spirally arranged on the twig but are twisted upwards to crowd the upper side.

Flowers are small, the sexes being separate but on the same tree. Male flowers are oval in shape, about 1 cm long, and rosy-red at first, then purplish when shedding the yellow pollen. Female flowers are about 1.6 cm long at flowering time, erect and oval-shaped, and consist of many reddish-purple scales. Blooms in June.

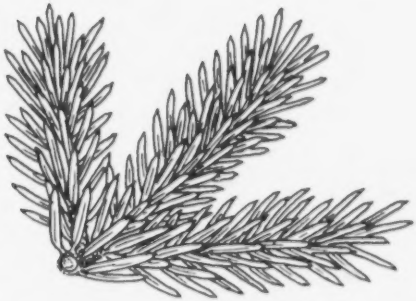
Fruit are pendant, oblong-cylindrical cones, 3 - 5 cm long, green tinged with red at first and pale brown when mature. The scales are smooth-margined and somewhat rounded or truncate. Bracts are small. The winged seeds drop during the first autumn but the cones remain for another year.

Found throughout Newfoundland and as far north as about 60 degrees latitude in Labrador. It prefers moist, well-drained soils but occur on a variety of sites including abandoned fields and coastal headlands.

cone



female flower



male flower

scale

seed

BLACK SPRUCE, *Picea mariana* (Mill.) B.S.P.
Pinaceae

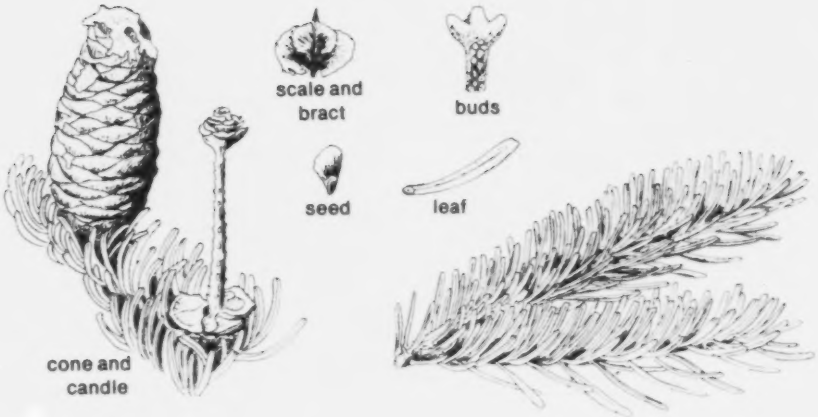
An evergreen coniferous tree usually less than 12 m high but attaining heights up to 18 m. In forests the trunk is straight and without branches for most of its length with a narrow crown of clustered branches. Trees growing in open areas are stunted, and irregular in appearance. Twigs are light reddish-brown, densely covered with short hairs, and when devoid of leaves are covered with peg-like leaf bases. Buds are somewhat sharp-pointed and hairy. The outer bud scales are long-pointed and extend beyond the tip of the terminal bud. Bark is reddish-brown to grayish, and scaly.

Leaves are needle-shaped, stiff and somewhat sharp-pointed, 4-sided in cross-section, shiny, bluish-green, and 0.5 - 2 cm long. The grooves are whitened with rows of stomata. The leaves are spirally arranged on the twig but are not usually twisted to the upper side. They appear more crowded on the twig than in the White Spruce.

Flowers are small, the sexes being separate but on the same tree. Male flowers are about 1 cm long, purplish-red, appearing yellow when shedding pollen, and mostly in clusters at the base of the previous years twigs. Female flowers are about 1 cm long at flowering time, rosy-red, erect, and solitary or in pairs at the ends of the branches. Blooms in June.

Fruit are pendant, compact, ovate cones, 2 - 3 cm long, purplish at first and dark reddish-brown when mature. The scales are firm and difficult to crush, rough-edged, and rounded or somewhat truncate. Bracts are very small. The winged seeds are shed gradually throughout the first winter but the cones may remain for many years.

Found throughout Newfoundland and north to about 57 degrees latitude in Labrador. It is the most abundant tree in Labrador. It occurs mostly on poorly drained soils and wet, boggy sites.



BALSAM FIR, *Abies balsamea* (L.) Mill.
Pinaceae

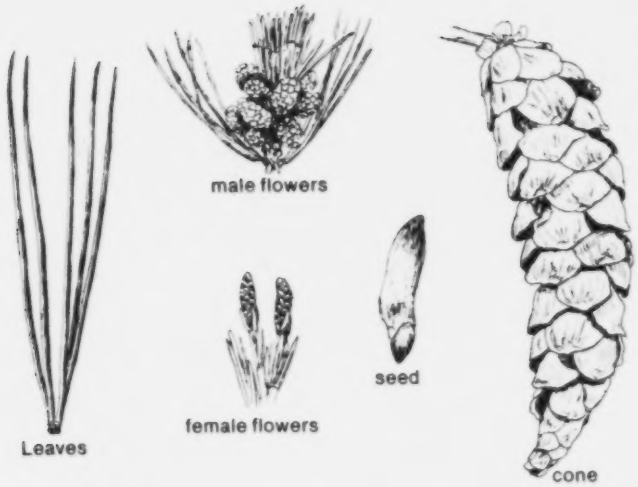
An evergreen coniferous tree, usually less than 15 m high but attaining heights up to 25 m, with a straight, gradually tapered trunk, and a conical crown of regularly whorled, horizontal branches. Twigs are pale brown to gray, slightly hairy, and smooth when the leaves are removed. Buds are rounded, about 0.5 cm long and have a waxy, resinous coating. Bark is smooth, bronze to purplish with many resin blisters on young trees, gray and somewhat scaly on older trees.

Leaves are narrowly linear, blunt or slightly notched at the tip, flattened in cross-section, and 1 - 2.5 cm long. The uppersurface is dark shiny green with one or two lines of stomata along the midrib, and the undersurface is silvery white with two broad bands of stomata. The leaves are spirally arranged but are twisted and spreading upwards on the twig. A circular scar is left when the leaf falls.

Flowers are of separate sexes but on the same tree. Male flowers are about 5 mm long, dark blue to purplish, covered with yellow pollen at flowering time, and clustered in the leaf axils. Female flowers are 1.7 - 2 cm long, light green tinged red, oval, and erect. Blooms in June.

Fruit are oblong-cylindrical cones, erect, 5 - 8 cm long, green at first, then purplish, and rusty-brown when mature, usually with whitish resin droplets on the surface. Scales are broad and rounded. Bracts are about two-thirds the length of the scales. The variety *phanerolepis* Fern. has rather large bracts that protrude beyond the scales. When mature the scales, bracts, and seeds fall from the cone leaving the central axis ('candles') which remain until the following summer or longer.

Found throughout Newfoundland and north to about 54 degrees latitude in Labrador. It occurs in a variety of habitats and is the most common tree of insular Newfoundland.



WHITE PINE, *Pinus strobus* L.
Pinaceae

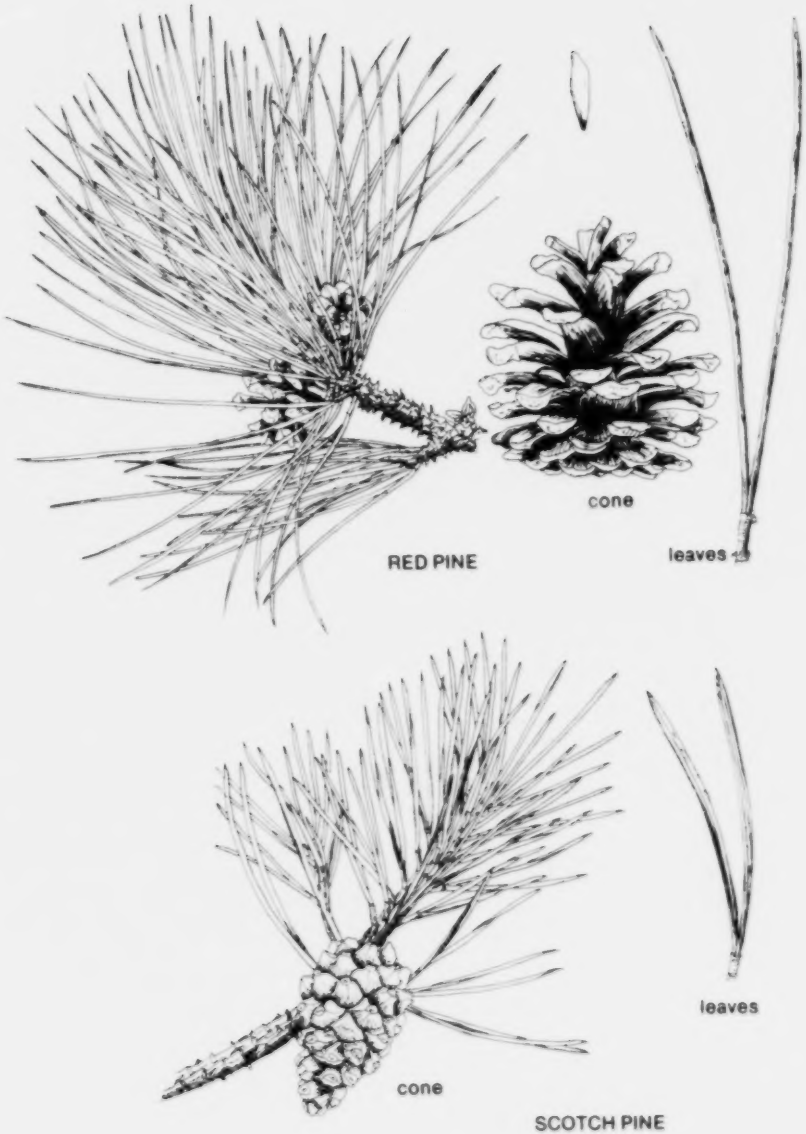
An evergreen coniferous tree ranging up to 25 m in height, with a straight trunk and a crown of wide-spreading horizontal branches that at the upper part are ascending at the tips. The top is often bent and flattened by the wind. It grows in a stunted form in bleaker habitats. Twigs are slender, green and downy at first, then becoming orange-brown and hairless, and roughened by leaf scars when the needles drop. Buds are sharp-pointed. Bark is smooth and grayish-green on younger trunks, darker and deeply furrowed with broad scaly ridges on older trunks.

Leaves are borne in clusters of 5, or rarely in clusters of 3. They are needle-shaped, straight, slender, soft and flexible, bluish-green, finely toothed along the edges, triangular in cross-section, 4 - 8.5 cm long and spirally arranged on the twig. The mature leaf clusters have no basal sheaths.

Flowers are small, with the sexes separate but on the same tree. Male flowers are purplish, appearing yellow when shedding pollen, 5 - 8 mm long, and composed of many stalkless stamens, appearing at the base of the new spring growth. Female flowers are pink, tinged with purple, and about 1 cm long at flowering time, appearing at the ends of the new shoots. Blooms in July.

Fruit are pendant, narrowly cylindrical cones that are usually slightly curved, on a distinct stalk, brown when mature, and 7 - 15 cm long. Scales are rather thin and do not have prickles at the tip. Bracts are small. The winged seeds mature during the second year and drop in autumn.

Found throughout most of Newfoundland but absent from the Great Northern Peninsula and Labrador. It is most common in western and central parts of the island. Occurs on a variety of sites but prefers moist, sandy or loamy soils.


cone
leaves
RED PINE
leaves
cone
SCOTCH PINE

RED PINE, *Pinus resinosa* Ait.
Pinaceae

An evergreen coniferous tree growing as high as 12 m in Newfoundland. The trunk is straight, with very little taper, and the crown is broad and oval-shaped. Twigs are stout, orange to reddish-brown, and rough. Buds are sharp-pointed, resinous, and somewhat hairy. Bark is reddish-brown and scaly on young trees, becoming furrowed with flat plates on older trees.

Leaves are borne in 2's and break off cleanly when doubled between the fingers. They are needle-shaped, straight, soft and flexible, dark green and shiny, finely toothed along the edges, 8 - 12 cm long, and semi-circular in cross-section. The mature leaf clusters have persistent, thin basal sheaths.

Flowers are small, both sexes borne separately on the same tree. Male flowers are dark purple, 8 - 13 mm long, and in dense clusters at the base of the new spring growth. Female flowers are reddish, occurring singly or a few to a cluster at the ends of the new shoots. Blooms from late June to mid-July.

Fruit are pendant, ovate cones, on a very short stalk, chestnut-brown when mature, 4 - 6 cm long, and at right angles to the stem. The scales are slightly thickened at the tips and do not have prickles. Bracts are small. The winged seeds mature and are shed during the second autumn but the cones may remain over winter.

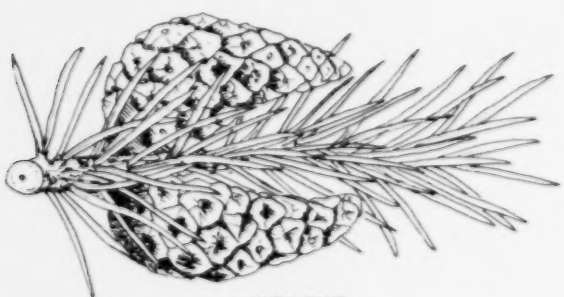
Found on dry, sandy soils, being restricted in Newfoundland to about ten localities in the central part of the island.

INTRODUCED PINES

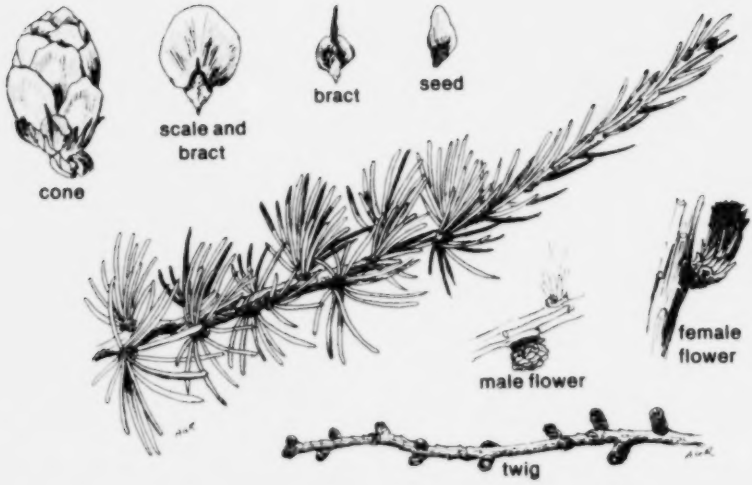
Two introduced pines are commonly planted around settlements. Both have the leaves in 2's.

SCOTCH PINE, *Pinus sylvestris* L., has leaves that are 3 - 7 cm long, bluish-green, and twisted. The cones are 4 - 5 cm long, on short stalks and generally point backwards on the branch. Indigenous to Europe.

JACK PINE, *Pinus banksiana* Lamb., has leaves that are 2 - 4 cm long, yellowish-green, and straight or slightly twisted. The cones are 4 - 5 cm long, stalkless, commonly curved, and point towards the tip of the branch. Indigenous to other parts of Canada.



JACK PINE



LARCH, TAMARACK, *Larix laricina* (DuRoi) K. Koch
Pinaceae

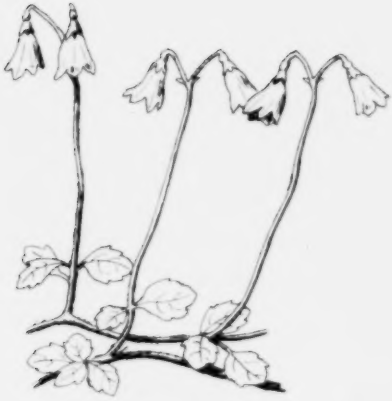
A small to medium-sized deciduous coniferous tree, usually less than 15 m high. In pure stands it has a straight and somewhat tapering trunk and an open, pyramidal crown. In open areas it is irregular and ragged in appearance, and sometimes dwarfed with prostrate branches. Branches are nearly horizontal, often ending in upturned shoots. Twigs are orange-brown, hairless, and have a knobby appearance in winter because of the many short, spur-like branches. Buds are small, rounded, dark red and shiny. Bark is smooth and gray when young, scaly and reddish-brown later.

Leaves are needle-shaped, slender, soft and flexible, pale bluish-green, 3-cornered, and 1 - 2.5 cm long. They are arranged in two ways — scattered and spirally arranged on the new elongated twigs; in clusters of 12 - 30 on the spur-like branches. The leaves turn yellow and drop by early November.

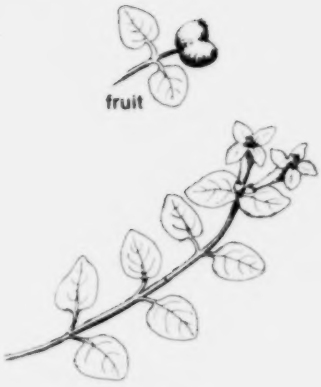
Flowers are small and solitary, the male and female separate on the same tree. Male flowers are light brown to yellowish, sessile, 4 - 5 mm across, and composed of many short-stalked anthers. They develop from leafless buds, usually on the underside of the twig. Female flowers are crimson, erect, 6 - 8 mm long, on a short stalk, and composed of many scales. They develop from leafy dwarf branches. Blooms from mid-May to early June.

Fruit are erect, oval or oblong cones, about 1.5 cm long, reddish at first but light brown when mature, and on a short, curved stalk. The 10 - 18 smooth, rounded scales have wavy margins and are about twice the length of the bracts. The winged seeds drop the first autumn but the cones remain for another year or more.

Found in various habitats — bogs, fens, heaths, serpentine barrens, hilltops, and forests. Occurs throughout most of Newfoundland and Labrador. It is commonly called "Juniper" in Newfoundland.



TWIN FLOWER



TWO-EYED BERRY

TWINFLOWER, *Linnaea borealis* L.
Caprifoliaceae

A slender, trailing, semi-woody evergreen with hairy, green or dark red stems.

Leaves are opposite, oval or rounded, 6 - 13 mm long, with a few rounded teeth mostly at the tips. There are scattered hairs on both surfaces.

Flowers are borne in pairs on delicate upright stalks, 5 - 8 cm high. The flower is bell-shaped, nodding and fragrant, pink or whitish, tinged and striped with deep pink. They are hairy inside and about 1 - 1.5 cm long. Blooms from late June to early August.

Fruit are small, one-seeded dry capsules.

Found mostly in coniferous woods but also occurs on wet heaths, fens and alpine barrens. Occurs throughout Newfoundland and most of Labrador.

TWO-EYED BERRY, *Mitchella repens* L.
Rubiaceae

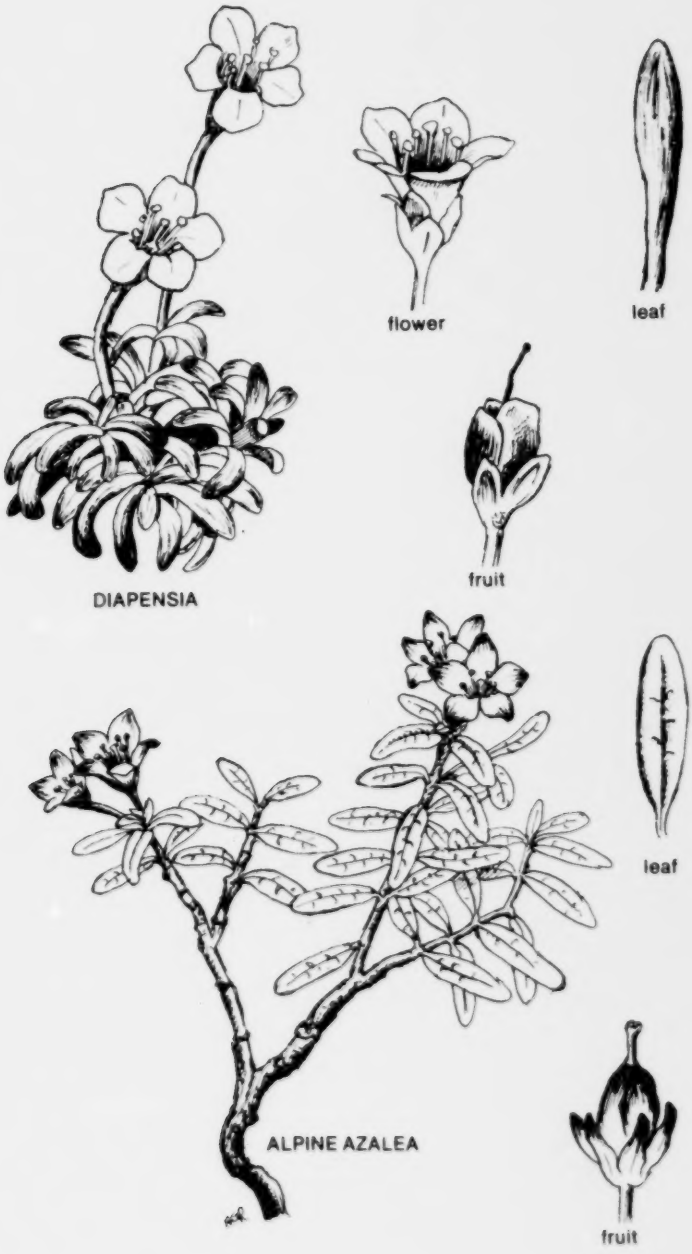
A trailing, barely woody, evergreen with slender smooth stems.

Leaves are opposite, shiny, hairless, 6 - 13 mm long, heart-shaped and entire.

Flowers are pink or white, small and tubular shaped with 4 spreading lobes, borne in pairs at the ends of the branches. Blooms in July.

Fruit are dry, 2-eyed red berries that are edible.

Has been found only in shady and mossy woods of southwestern Newfoundland.


flower
leaf
fruit
DIAPENSIA
leaf
ALPINE AZALEA
fruit

DIAPENSIA, *Diapensia lapponica* L.
Diapensiaceae

A tufted evergreen sub-shrub forming firm rounded clumps 2.5 - 8 cm high. Stems are covered by sheathing leaf bases.

Leaves are mostly opposite, strongly ascending, overlapping, and persistent on the stem. They are narrow and spatula-shaped, 1 - 2 cm long and curving downwards at the tips.

Flowers are solitary on stiff stalks, white and bell-shaped with 5 rounded, spreading lobes, and 1 - 1.5 cm across. There are 5 yellow stamens. There are two blooming periods — June and late July to mid-August.

Fruit are dry capsules enclosed by a persistent calyx and containing a few large seeds.

Found in alpine habitats — wind-swept barrens, headlands, cliffs, and mountain-tops, throughout most of Newfoundland and Labrador.

ALPINE AZALEA, *Loiseleuria procumbens* (L.) Desv.
Ericaceae

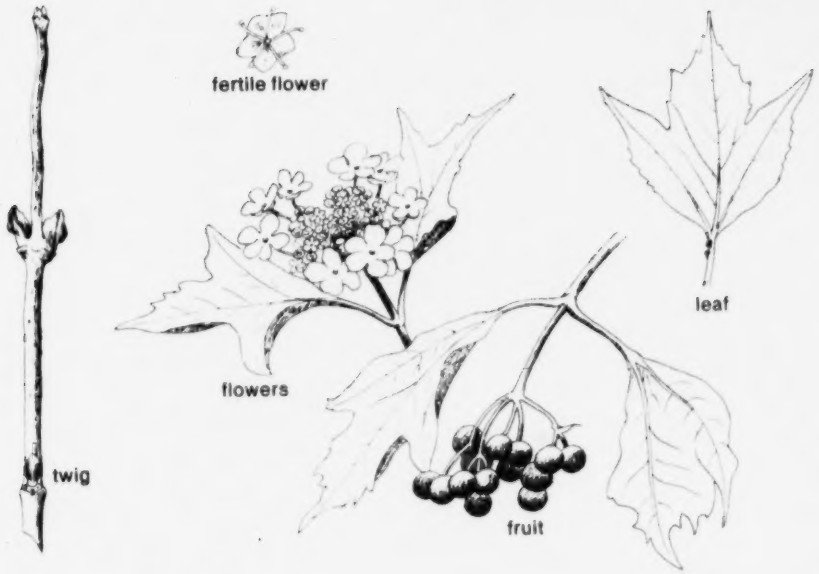
A tufted, much-branched, evergreen shrub, 10 - 13 cm high. Twigs are hairless but have prominently raised opposite leaf scars.

Leaves are opposite, elliptical, rounded at the tips, 4 - 8 mm long and leathery. Midrib is depressed above and prominent beneath. Margins are entire and revolute.

Flowers are small, pink, broadly bell-shaped with 5 lobes and in few-flowered terminal clusters. There are 5 stemens. Blooms from late May to late June.

Fruit are dry, 2 - 3 parted capsules that are red at first but brown when mature.

Found in exposed coastal and alpine habitats throughout Newfoundland and Labrador.



HIGHBUSH CRANBERRY, *Viburnum trilobum* Marsh.
Caprifoliaceae

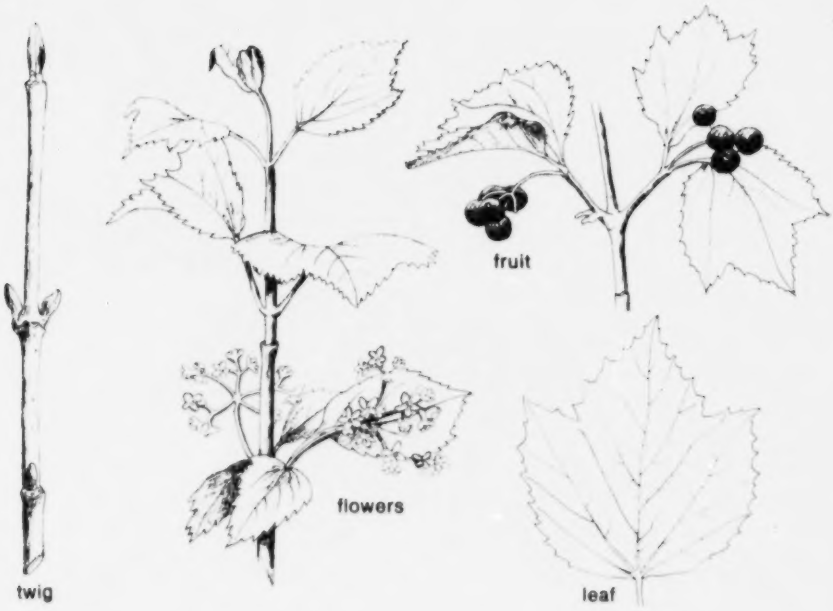
An upright shrub, 1.5 - 3 m high. Twigs are light reddish-brown, usually with several twisted ridges and scattered light-colored lenticels. There are no terminal buds, the twig terminating as a dead, dark extension beyond the end-most lateral buds. The two outermost buds are much larger than the others; they contain the preformed flowers. Buds are two-scaled and shiny red, yellowish at the base. The older bark is ashy-gray.

Leaves are opposite, 8 - 10 cm long, palmately veined and three lobed — the lobes long-pointed. Quite variable, however, in shape. The margins are hairy and sparingly toothed. The blade is dark green and somewhat hairy above, especially towards the tips, paler and usually hairy beneath. Leaf-stalks are about 2.5 cm long, bearing 1 or 2 dome-shaped glands near the base of the leaf. In autumn the leaves turn bronze-purple or dull red.

Flowers are creamy-white, borne in flat-topped terminal clusters (cymes) 10 - 11 cm across. Each cluster has two kinds of flowers — small, yellowish fertile flowers at the center and larger, more conspicuous, sterile flowers at the margin. The corolla is 5-lobed and there are 5 stamens. The marginal flowers open a few days before the center ones. Blooms in July.

Fruit are oval-shaped drupes, juicy, bright red and translucent when ripe, and borne in terminal clusters. They have a single flat seed (stone), and are edible, being acidic and tart. The fruit are red by mid-August but do not ripen until mid or late September and then remain on the bush throughout the winter.

Found along banks and shores of streams, margins of damp woods, and in wet thickets throughout Newfoundland.



SQUASHBERRY, *Viburnum edule* (Michx.) Raf.
Caprifoliaceae

An erect or straggling shrub, 1 - 2 m high. Twigs are shiny grayish-brown, marked with 4 ridges, two more pronounced than the others. Buds are two-scaled, dark red and shiny. Newer branches are dark reddish-brown and have scattered light lenticels. Older bark is ashy-gray.

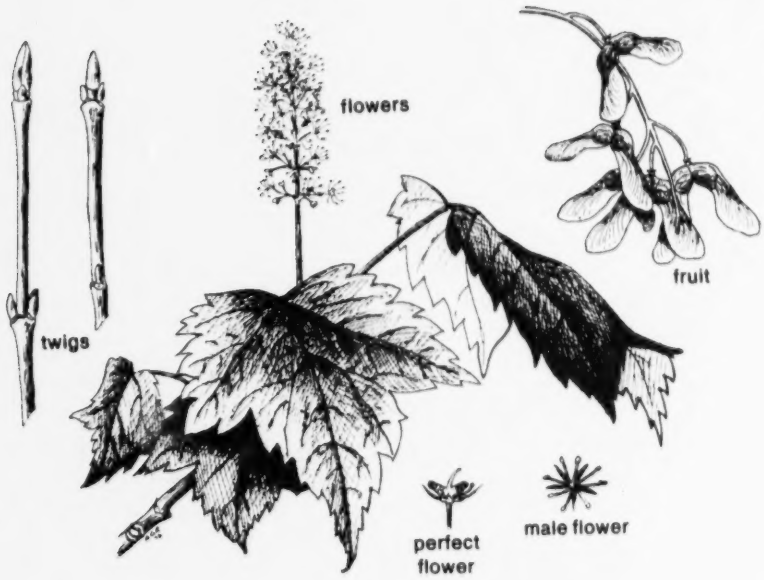
Leaves are opposite, 5 - 8 cm long, palmately veined, usually with three uneven lobes that are coarsely and irregularly toothed. They are variable in shape, sometimes looking like those of Highbush Cranberry. Both surfaces are smooth but the undersurface sometimes has a few scattered hairs or small brown scales. There may be glands at the leaf base but not on the leafstalk. In autumn the leaves turn dark red or purplish.

Flowers are milky-white and form a loose cluster (cyme) 4 - 5 cm across. All the flowers in the cluster are the same size and fertile. The clusters are usually paired, one on either side of the stem. Blooms from early to late June.

Fruit are red drupes about 7 mm in diameter and contain a single flattened seed. Ripen by the third week of August.

It is more common than the Highbush Cranberry and is found along brooks, in wet thickets, the edges of woods, and damp valleys. Occurs throughout Newfoundland and north to about 58 degrees latitude in Labrador.

Squashberries are not as acidic as Highbush Cranberries, and both make excellent jelly.



MOUNTAIN MAPLE, *Acer spicatum* Lam.
Aceraceae

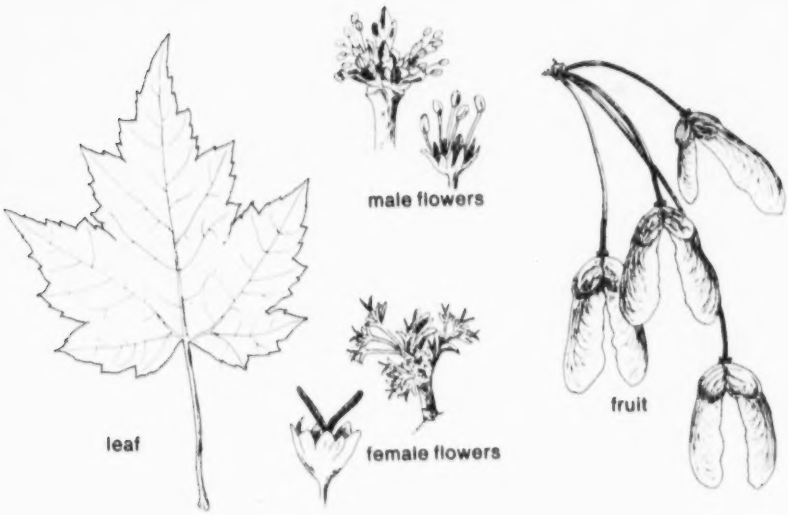
A large, much-branched shrub or small tree. New branches are brown, reddish towards the tip and marked with white lenticels. Older bark is smooth, ashy-gray or brownish. Winter twigs are covered with short gray hairs, giving them a dull velvety appearance. Buds are oppqsite, red, slender and pointed, the two scales meeting along the edge.

Leaves are opposite, 8 - 13 cm long, thin-textured, usually three-lobed, the lobes tapering. They are coarsely toothed, usually longer than broad, on reddish leafstalks that are usually longer than the leaf blade. The surfaces are yellowish-green and smooth above, downy and covered with whitish hairs beneath. In the fall the leaves turn yellowish or reddish-brown.

Flowers appear after the leaves are fully grown. They are borne in upright, dense terminal clusters, that are somewhat cone-shaped and 3 - 5 cm high. Each flower is greenish-yellow, 5 - 7 mm across and has 5 petals. There are usually two kinds of flowers interspersed in a cluster — those having both stamens and a pistil, and those having only stamens. There are 7 - 8 stamens. Blooms in late June or early July.

Fruit consist of paired seed-cases (samaras), each with one seed and a wing that is 1.5 cm long. The samaras are reddish, leathery and flattened, in clusters, the short stalks arranged alternately along a central stem. Ripen by September.

Found throughout Newfoundland and southern Labrador. It is most abundant in the southwestern section of the island. Inhabits damp rocky woodlands and thickets, moist stream banks, ravines, and moist hillsides.



RED MAPLE, *Acer rubrum* L.
Aceraceae

A small to medium-sized tree, usually less than 12 m high. When growing in the open the trunk is short and divided into several main branches, with a dense crown. In the forest the trunk may be free of branches for half its length. Twigs are somewhat stout to slender, shiny, dark red, hairless, and dotted with white lenticels. Buds are opposite, dark red, with 2 or more pairs of white-margined scales. There are two kinds — leaf buds are oval in shape and somewhat sharp-pointed; flower buds are roundish and clustered at the twig ends. Bark is ashy-gray and smooth on young trunks, dark gray and rougher on older trunks.

Leaves are opposite, 5 - 14 cm across, with three to five lobes, dark green above, whitened beneath, hairless on both surfaces, and irregularly and sharply double-toothed. The edges of the terminal lobe are nearly parallel to the midrib. In autumn the leaves turn scarlet.

Flowers appear before the leaves. They are borne in slender-stalked clusters near the ends of the twigs, mostly on the uppermost branches. Male and female flowers are in separate clusters and usually on different trees. Male flowers are yellowish, about 5 mm across and have 5 stamens. Female flowers are red and 5 - 6 mm across. Blooms from early May to early June.

Fruit are similar to those of Mountain Maple. The wing is 1.5 - 2 cm long. The fruit stalks are long and arise from one point on a short stem. Ripen from mid-June to mid-July.

Found throughout most of Newfoundland being most common in western and central parts of the island. It is not found on the Great Northern Peninsula or in Labrador. Prefers moist river valleys and wet bottom lands but may occur in drier habitats.

LAMBKILL, SHEEP LAUREL, *Kalmia angustifolia* L.
Ericaceae

A much-branched evergreen shrub up to 1 m tall, forming extensive clumps, arising from creeping bases. Stems are smooth, reddish-brown and do not have prominent ridges.

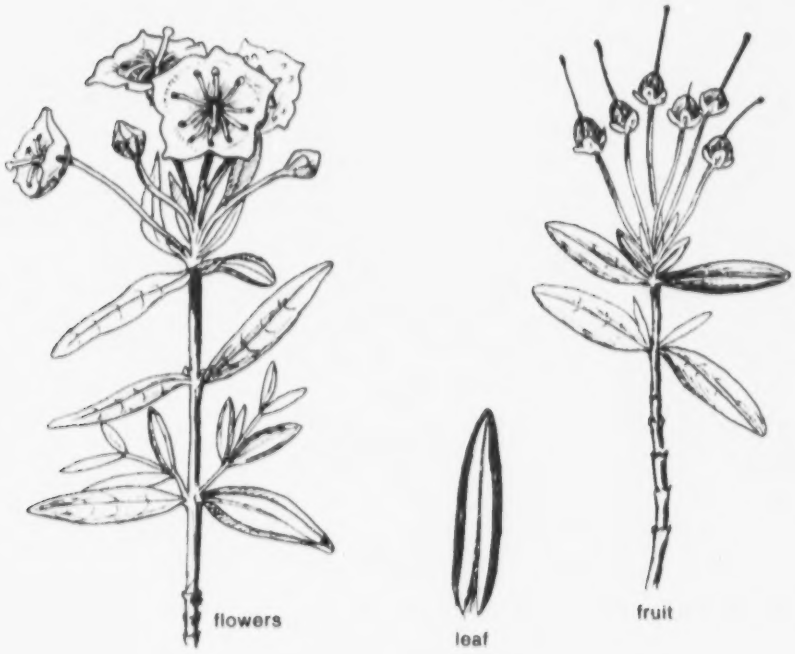
Leaves are usually in whorls of three, oblong to elliptical, 2 - 5 cm long, leathery, olive green and shiny above, pale green and dull beneath. Margins are entire and often revolute. New leaves may have short hairs on the uppersurface. In winter the leaves are tinged with red.

Flowers are rose-pink, forming showy lateral clusters (corymbiform racemes), 4 - 5 cm across, the new leaves extending beyond them. The corolla is saucer-shaped, shallowly 5-lobed and about 1.2 cm across. The flower stalks have minute glandular hairs. The 10 stamens are caught in tiny pockets of the corolla, springing outward when the center of the flower is touched. The form *candida* Fern. has white flowers. Blooms from late June to early August.

Fruit are dry, flattened, 5-parted capsules about 4 mm across, containing numerous small seeds. Ripen in the fall, but capsules and seeds often persist throughout the winter or longer.

Found in a variety of habitats throughout Newfoundland and southern and central Labrador including bogs, swamps, heaths, and forested areas.

Lambkill is commonly referred to as gold-withy or goo-witty in Newfoundland.



BOG LAUREL, *Kalmia polifolia* Wang.
Ericaceae

A low, slender-stemmed evergreen shrub. Stems are smooth and two-ridged.

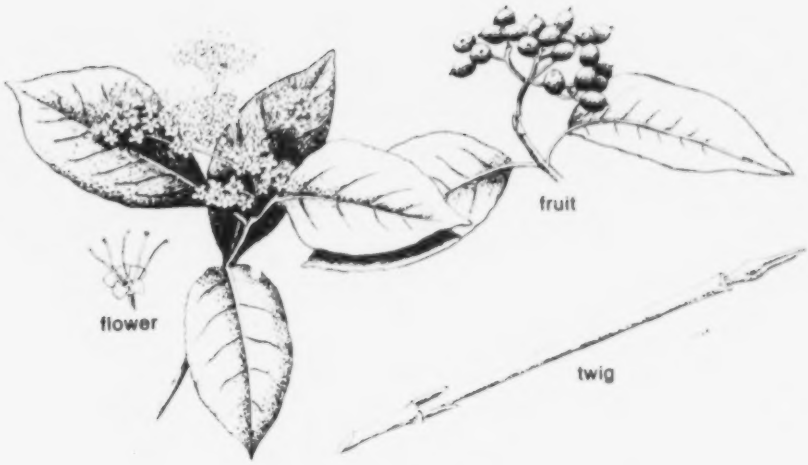
Leaves are opposite, linear to elliptical, usually blunt at the tip, leathery, shiny dark green above, whitened or yellowish beneath with small hairs, and 1.5 - 3 cm long. Margins are entire and revolute. The midvein is depressed above and prominent beneath.

Flowers are deep pink, in few-flowered terminal clusters (corymbiform racemes) arising from among many leaf-like bracts. Corolla is saucer-shaped, 5-lobed, and about 1.3 cm across. The flower stalks are smooth. There are 10 stamens arranged like those of Lambkill. Blooms in June. A white flowering form, *leucantha* Schofield and Smith, has been reported from Newfoundland.

Fruit are oval, upright, 5-parted red capsules about 5 mm long, containing many small seeds. Ripen in August.

Found in bogs, fens and wet heaths throughout Newfoundland and most of Labrador.

Bog Laurel is sometimes confused with Bog Rosemary. Bog Rosemary has alternate leaves that are dull green above, and flowers that are urn-shaped.



NORTHERN WILD RAISIN, WITHEROD, *Viburnum cassinoides* L.
Caprifoliaceae

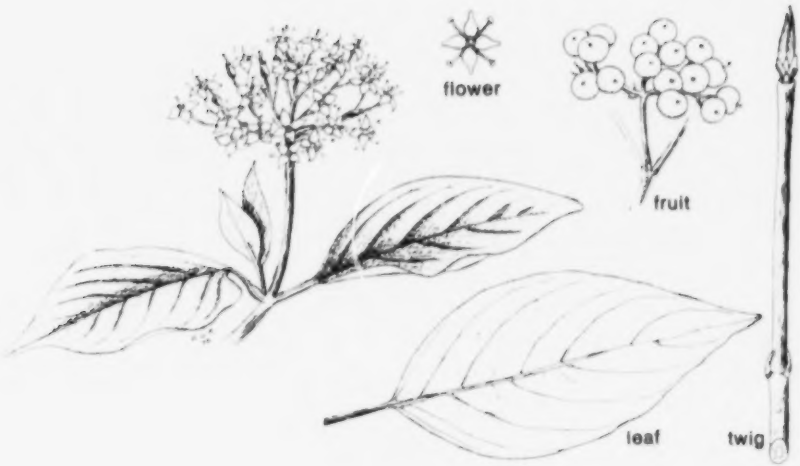
An upright shrub, 1 - 3 m high, with spreading branches and a rounded form. The young shoots are scurfy, covered with many small, rusty-colored scales. The larger flower buds, usually terminating the twigs, are only partly covered by the two bud scales. Often there are no true terminal buds. The older bark is a shiny reddish-brown, sometimes flaky and marked with many horizontal whitish lenticels. Newer branches are light brown, contrasting sharply with the older bark.

Leaves are opposite, oval or elliptical, rounded at the base and usually with a prolonged tip, thickish, and 5 - 8 cm long. They are dark green, smooth and shiny above, lighter and dotted with minute brown scales beneath. The margin is toothed or wavy but can be entire. In autumn the leaves turn purplish, then bright red. The leafstalks are winged.

Flowers are creamy-white, in flat-topped clusters (cymes) 5 - 10 cm across. Each flower has 5 rounded lobes and 5 stamens and is about 5 mm across. Blooms in July.

Fruit are elongated or spherical drupes about 6 mm in diameter. When mature they are bluish-black and covered with a powder. Pale green (or yellowish) and rose-colored fruit are often on the bush at the same time. They contain a large flattened seed and are edible. Ripen by early September.

Generally found in wet habitats — thickets, clearings, borders of woods, wet heaths, along streams and around ponds. Common throughout most of Newfoundland but rare on the Great Northern Peninsula. It is not found in Labrador.



RED-OSIER DOGWOOD, *Cornus stolonifera* Michx.
Cornaceae

A loosely spreading or ascending shrub, 1 - 2.5 m high, often forming extensive thickets. In winter the branches are a bright red making it very conspicuous. With the progression of the vegetative season, however, they turn greenish on the lower parts. Twigs are somewhat downy near the ends and are dotted with white lenticels. Older branches are smooth and shiny. The large pith is white. Buds are densely hairy and have 2 scales. The terminal buds contain preformed flowers.

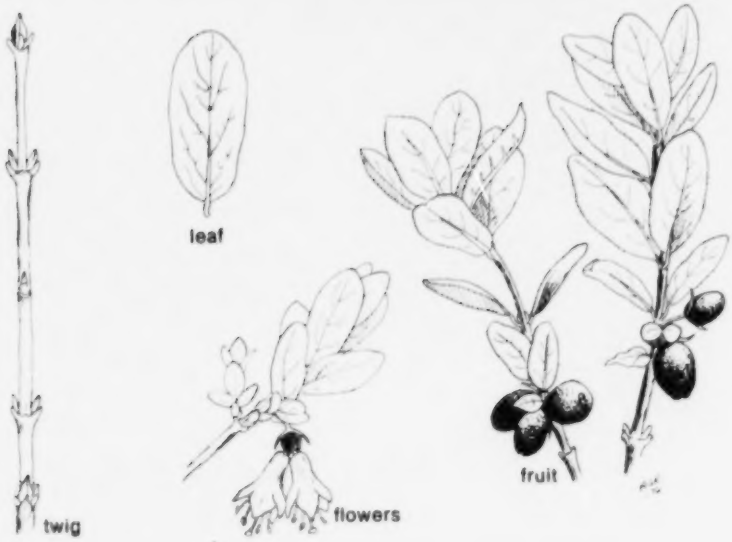
Leaves are opposite, elliptical to broadly oval, 5 - 12 cm long, dark green above, whitened beneath, with fine hairs on both surfaces. There are 5 - 7 pairs of veins that run parallel to each other and incurve towards the pointed tip of the leaf.

Flowers are creamy-white, in flat-topped or rounded terminal clusters (cymes) up to 5 cm across. Each flower has 4 petals and 4 stamens and is 6 - 8 mm across. Viburnum flowers are similar but have 5 petals. Blooms during June and July.

Fruit are clusters of white drupes, each containing a 2-seeded stone. Ripen by mid-August. They are not considered edible by man.

Found in wet and moist habitats — thickets, swamps and other low-lying areas throughout Newfoundland and southern and central Labrador.

This shrub is frequently used as an ornamental and is easily propagated by layering. The fruit are eagerly eaten by birds.



NORTHERN HONEYSUCKLE, *Lonicera villosa* (Michx.) R. & S.
Caprifoliaceae

A small, low shrub with upright branches, usually less than 1 m high. New shoots and leaves have a bluish-purple cast which gives a bluish 'bloom' effect to the bush. Twigs are hairy and medium brown in color. Older branches are smooth and flaky. Winter buds are somewhat pressed towards the twig, sharp-pointed, reddish-brown, and covered by 2 scales. Also, the buds are raised on persistent leaf bases. Papery scales separate the newer growth from that of the previous year. The opposing leaf scars are connected by lines.

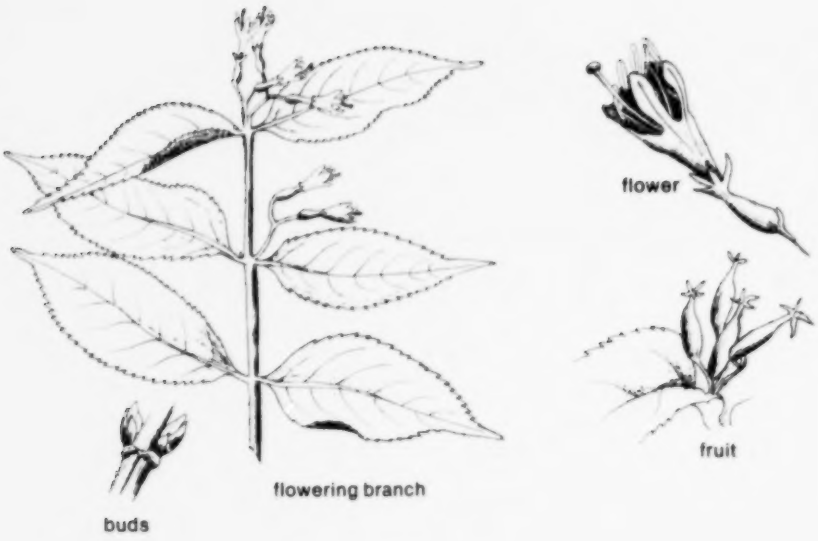
Leaves are opposite, nearly sessile, oblong or oval-shaped, rounded at the tip, firm-textured and 1.2 - 5 cm long. The margin and both surfaces are hairy. The uppersurface is dark green, the undersurface pale green or whitened.

Flowers are paired, borne on short peduncles in the leaf axils. They are pale yellow, funnel-shaped and 5-lobed, and about 1.5 cm long. Blooms from late May to late June.

Fruit are dark blue berries, edible, juicy, and contain many fine seeds. They are usually hidden beneath the leaves. Ripen by mid or late July and drop by mid-August.

Found in fens, bogs, wet heaths and wet meadows, along the shores of ponds, brooks, and in other wet places. May also occur in more exposed habitats, such as rocky barrens. Occurs throughout Newfoundland and most of Labrador.

The Northern Honeysuckle has an unusual characteristic. After the flowers have dropped, the two adjoining ovaries grow together, becoming surrounded by a fleshy cup. The resulting berry is two-eyed, suggesting its duplex origin.



NORTHERN BUSH HONEYSUCKLE, *Diervilla lonicera* Mill.
Caprifoliaceae

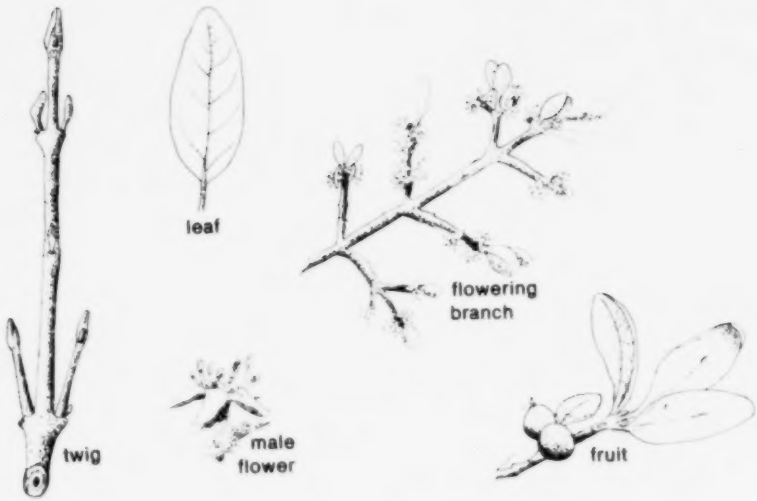
A low, spreading or scrambling shrub. Twigs have 4 slender ridges that are densely hairy when new. Older branches are smooth and usually have scaling bark. There are several scales at the base of the twig. Buds have 4 or more hairy-margined scales. Each leaf scar has 3 bundle scars.

Leaves are opposite, elliptical, oval or ovate, rounded at the base and tapering at the tip, 5 - 10 cm long. They are dark green and slightly wrinkled above, paler beneath. The margin is finely toothed and hairy. The midrib and main veins are also sometimes hairy.

Flowers are mostly in clusters of 3 at the ends of the branches (cymose) or in the axils of the upper leaves. They are tubular or funnel-shaped with 5 spreading petal tips, and honey-yellow to orange or scarlet in color, 1.2 - 1.8 cm long, and downy. The 5 stamens and pistil project beyond the corolla. Blooms from early July to early August.

Fruit is a smooth, slender-pointed, 2-valved capsule, bearing 5 calyx lobes at the tip. The seeds are shed in late fall.

Found at the edge of forests, along brooks and shores, in dry woods, clearings, and rocky places. There are no records from the Great Northern Peninsula and Labrador.



SOAPBERRY, *Shepherdia canadensis* (L.) Nutt.
Elaeagnaceae

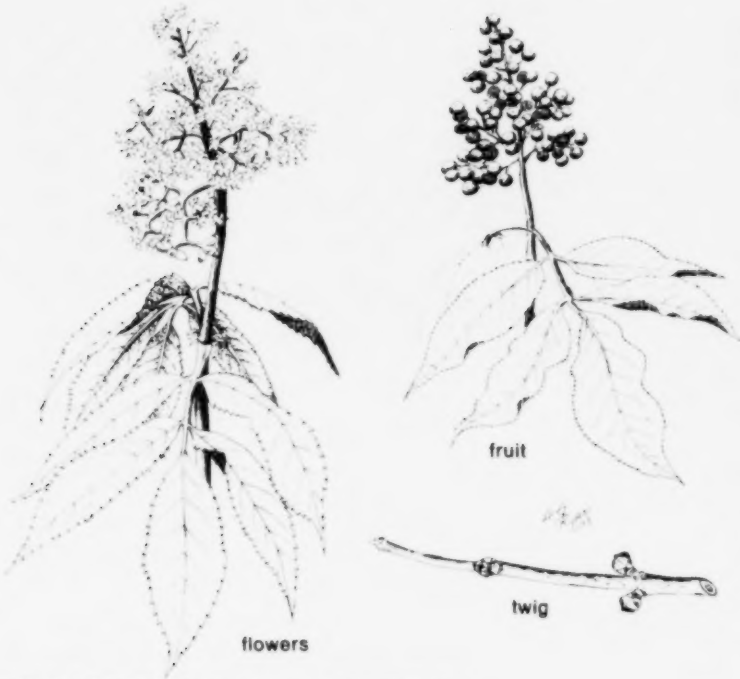
A much-branched spreading shrub up to 1.5 m high. Twigs are rusty-brown and scurfy, densely covered with small brown scales. Older branches are grayish-brown and smooth. Buds are scurfy and have 2 scales.

Leaves are opposite, elliptic or oval, with a rounded tip, 1.5 - 5 cm long, dull dark green and usually hairy above, silvery and scurfy with rusty scales beneath. Margins are entire or slightly irregular.

Flowers are very small (3 - 4 mm across) and yellowish, clustered in the leaf axils, appearing as the leaves unfold. Male and female flowers are on separate plants. Male flowers have 4 sepals and 8 stamens; female flowers have 4 sepals and a pistil. Blooms from mid-May to mid-June.

Fruit are oval, translucent, yellowish-red drupes, 6 mm in diameter, covered with scattered scales, and edible. Ripen by mid-July. When beaten with sugar they froth up into a salmon-colored mass, hence the name Soapberry.

Found in various habitats — at the edge of woods, along shores of rivers, the base of cliffs, rocky slopes, exposed barrens and headlands. Recorded from the west coast, the Great Northern Peninsula, and parts of the northeast coast of Newfoundland.



RED ELDERBERRY, *Sambucus pubens* Michx.
Caprifoliaceae

A coarse, vigorous shrub occasionally attaining a height of 4 m, as broad as it is high. Twigs are light brown and somewhat hairy. Older branches have smooth brown bark marked with many warty lenticels. Younger stems have a spongy, reddish-brown pith. Winter buds are large, globular-shaped and greenish-yellow with purple-tipped scales. There are no terminal buds. Leaf scars are large with connecting lines between them.

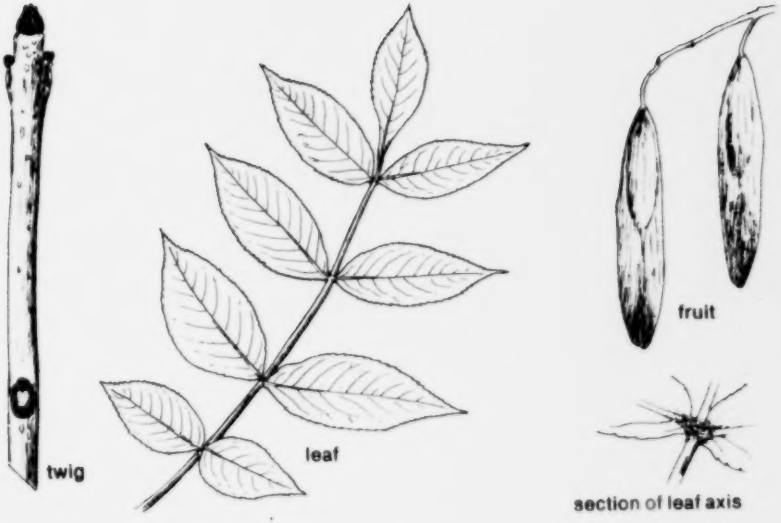
Leaves are opposite and pinnately compound, divided into 5 - 7 leaflets. Leaflets are oblong to lanceolate, long-pointed, sharply toothed, dark green and smooth above, paler and usually downy beneath, and 8 - 12 cm long. The leaves drop with little change of color in the autumn.

Flowers form pyramidal or rounded clusters (cymes) up to 10 cm high. Each flower is small, the 5-cleft corolla creamy-white or pink, becoming brown when dry. There are 5 stamens. Blooms in June and early July.

Fruit are brilliant red drupes, about 5 mm in diameter, and have 3 - 5 nutlets each. They are not considered edible. Ripen by early August and remain on the bush till mid-September.

Found in rocky and dry woods, forest clearings, damp valleys, along brooks and roadsides. Occurs in western and central Newfoundland and east to the Clarenville area. It is absent from the Great Northern Peninsula, the Avalon Peninsula and parts of the south and east coasts, and Labrador.

The fruit are usually quite abundant, the scarlet color contrasting sharply with the dark green foliage, making it a very attractive ornamental.



BLACK ASH, *Fraxinus nigra* Marsh.
Oleaceae

A small-sized deciduous tree with a slender straight trunk that almost extends to the top of the open crown of ascending branches. Twigs are stout, ashy-olive to light gray, dull and hairless, with scattered lenticels, and opposite, dark brown or blackish buds. The terminal bud is conical or broadly triangular and is about 6 mm long. Lateral buds are small and round. Leaf-scars are large and semicircular with a large number of bundle scars. Bark is light gray, soft and scaly, developing into soft curly ridges that rub off easily.

Leaves are opposite and pinnately compound, 20 - 35 cm long, with 7 - 11 leaflets that are sessile except for the terminal one which has a short stem. Leaflets are elliptical, obovate, or oblong-lanceolate, rounded to broadly wedge-shaped at the base, tapering from above the middle to a slender tip, finely sharp-toothed, and 7 - 12 cm long. They are dark green and hairless above, paler and mostly hairless beneath, and have tufts of light brown hairs where the leaflets join the leaf axis.

Flowers are small and dark purplish, in loose, many-flowered clusters (panicles) 10 - 12 cm long, appearing before the leaves. There are no petals or sepals. Male and female flowers are often on separate trees but may be on the same tree. Or, the flowers are sometimes perfect and all three kinds may be found on the same tree. Blooms in June.

Fruit are samaras, being one-seeded, flat and narrowly oblong with a broad thin wing surrounding and extending beyond the seed, 2.5 - 4 cm long. They are arranged in loose clusters, 15 - 20 cm long. Mature in autumn.

A rare tree in Newfoundland, found on the West Coast, south of Bonne Bay. There is one record from the Springdale area. Occurs along the shores of brooks and ponds, as well as on dry limestone talus.

SMOOTHLEAF MOUNTAIN AVENS

TOOTHLEAF MOUNTAIN AVENS

leaves

SMOOTHLEAF MOUNTAIN AVENS, *Dryas integrifolia* Vahl

Rosaceae

A trailing or matted evergreen shrub, 5-12 cm high. Leaves are alternate, lanceolate to elliptic, broadest towards the base, and 0.5 - 1.3 cm long. The margins are revolute, entire or with a few teeth towards the base. The uppersurface is dark green, shiny and hairless, or densely hairy in the rare form *canescens* (Simmons) Fern. The undersurface is usually densely white-hairy.

Flowers are solitary, white and saucer-shaped, 1.5 cm across, having 8-10 petals, and many yellow stamens and pistils. The flower stalks are 5-15 cm long, without bracts. Blooms in June or July.

Fruit are small achenes with conspicuous long feathery styles, 1.5-3 cm long, that are smoky-white or tinged with bronze and that tend to twist together.

Found on limestone barrens, cliffs, and talus slopes of western Newfoundland, the Great Northern Peninsula, and Labrador.

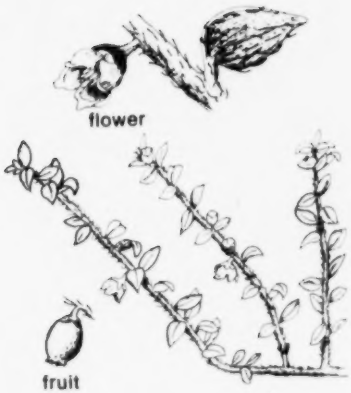
TOOTHLEAF MOUNTAIN AVENS, *Dryas drummondii* Richards.

Similar to the above. Leaves, however, are broader, often inversely ovate, coarsely toothed, and wedge-shaped at the base. The margins are slightly revolute. The uppersurface is dark green, dull and smooth or somewhat hairy. The undersurface is white-hairy.

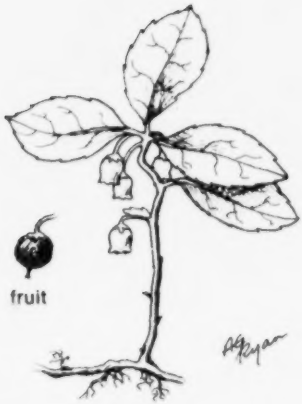
Flowers are yellow or orange, and somewhat bell-shaped. The flower stalks are 5-25 cm long and have 1-4 bracts. The styles of the fruit are white to buff and 3-4 cm long.

Restricted to the limestone region around the Bay of Islands of western Newfoundland.

Rouleau (1956) has described *Dryas* X *lewinii* Rouleau, a hybrid between *D. drummondii* and *D. integrifolia*. The leaves are toothed like *drummondii* but are heart-shaped or truncate at the base. The flowers are white and saucer-shaped like those of *integrifolia*. Found around the Humber area of western Newfoundland.



CREEPING SNOWBERRY



WINTERGREEN

CAPILLAIRE, CREEPING SNOWBERRY, *Gaultheria hispidula* (L.) Bigel. Ericaceae

A trailing, delicate evergreen. The slender stems are green or brown and covered with long hairs.

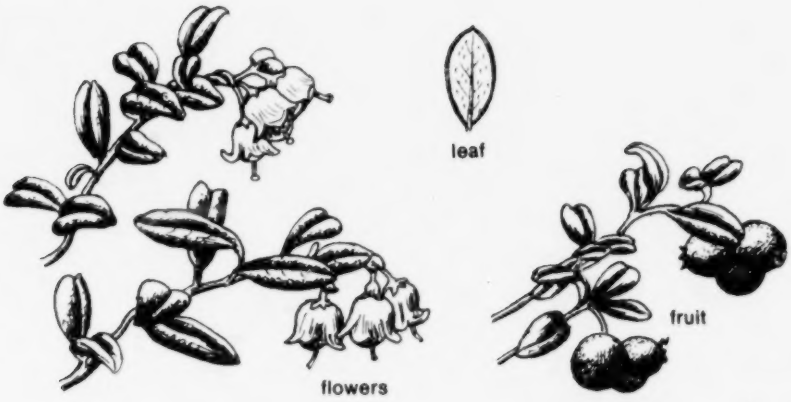
Leaves are alternate, two-ranked, oval-shaped, 0.5 - 1 cm long and somewhat revolute. The uppersurface is smooth and shiny, the undersurface with scattered bristly brown hairs.

Flowers are small, bell-shaped, and greenish-white, on short stalks arising from the leaf axils. The corolla is divided into 4 lobes, each lobe somewhat reflexed. There are eight stamens. Blooms from May to mid-June.

Fruit are delicate, spindle-shaped, snow-white, fleshy, berry-like capsules, 5 - 6 mm long, many seeded and covered with small bristles. They are edible, having a wintergreen flavor. Ripen by August.

Usually found in cold wet woods. Found throughout Newfoundland and north to about 55 degrees latitude in Labrador.

WINTERGREEN, *Gaultheria procumbens* L., is also found in Newfoundland, being restricted to a few dry, sandy areas in the central part of the island. It also is an evergreen creeping shrub, but the flowering branches are ascending, 8 - 12 cm high, and leafy at the top. The leaves are 2.5 - 5 cm long, elliptical, leathery, and obscurely toothed. The flowers are small, nodding white bells occurring singly or a few to a cluster. The fruit are bright red and fleshy, edible, spicy and many-seeded. Ripen in the fall and persist throughout the winter.



PARTRIDGEBERRY, MOUNTAIN CRANBERRY, *Vaccinium vitis-idaea* L.
Ericaceae

A low, mat-forming evergreen shrub, 2 - 12 cm high, the erect branches arising from extensive creeping slender stems. Twigs are shiny and have a few scattered hairs.

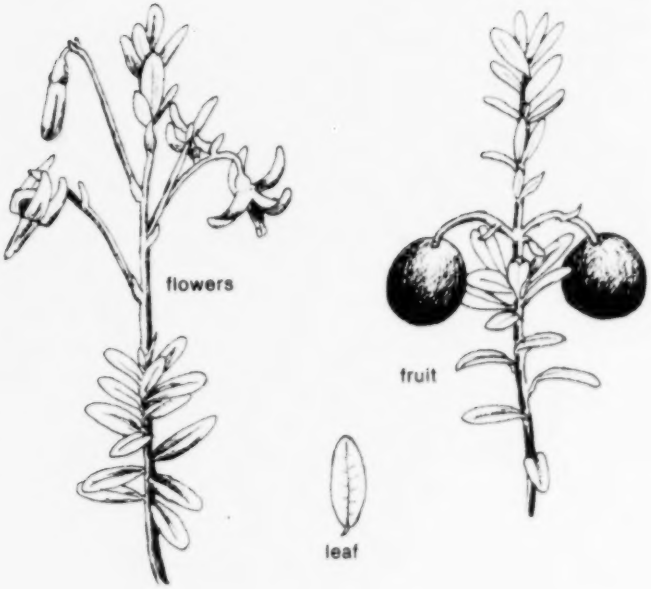
Leaves are alternate, crowded on the stem, oval, usually broadest towards the tip, 1 - 1.5 cm long, thick and leathery. The uppersurface is dark green and shiny; the undersurface is paler and dotted with blackish bristly points. The midrib is furrowed and the margins are entire or slightly toothed and somewhat revolute.

Flowers are pink or reddish nodding bells about 6 mm long, forming terminal clusters of 3 - 5 (or more). The corolla has 4 lobes that are somewhat reflexed. There are eight stamens. Blooms from mid-June to mid-July.

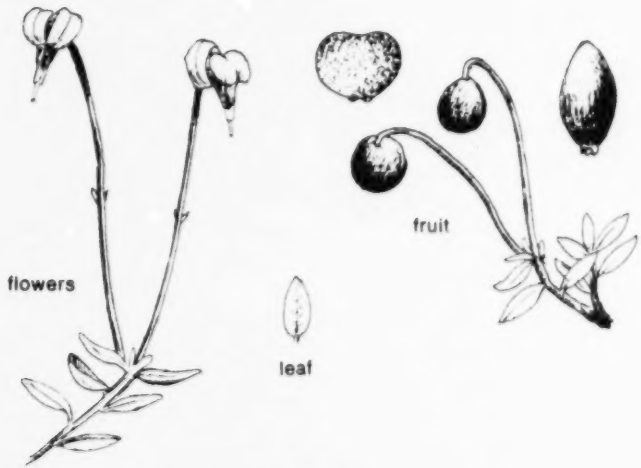
Fruit are edible shiny berries, dark red when ripe, 6 - 8 mm in diameter. Ripen by mid-September. May remain on the bush throughout the winter and into the following spring.

Found on rocky and dry peaty soils, wet heaths, barrens and coastal headlands throughout Newfoundland and Labrador.

An important Newfoundland shrub. Large quantities of the berries are harvested each year to supply local and foreign markets. The berries are widely used to make jellies, sauces, and jams. The ripe berries are quite tart, improving in flavor after being touched by autumn frosts.



LARGE CRANBERRY



SMALL CRANBERRY

LARGE CRANBERRY, *Vaccinium macrocarpon* Ait.
Ericaceae

A trailing evergreen with forking stems and short erect flowering branches. Stems are brown and the older bark is flaky.

Leaves are small, 0.5 - 1 cm long, alternate, leathery and nearly sessile, elliptical or wedge-shaped with rounded tips. They are dark green and shiny above, pale or whitened beneath. The margins are entire and slightly revolute.

Flowers are pink, 6 - 7 mm long, and nodding, the four petals recurved back forming a "Turk's cap" and the eight stamens forming a "beak". They are in clusters of 2 or 3, arising from the axils of reduced leaves, terminated by a long leafy shoot, 5 - 8 cm high. There are two tiny bractlets near the end of the flower stalks. Blooms from early July to early August.

Fruit are edible berries, 1 - 1.5 cm in diameter, juicy and tart, becoming dark red or purple when ripe. Ripen in October or November.

Found on bogs and fens, wet heaths and in moist oceanic areas. It is more oceanic than the next species. There are no Labrador records.

SMALL CRANBERRY, MARSHBERRY, *Vaccinium oxycoccus* L.

A slender, trailing evergreen with very small thread-like stems that are ascending at the ends.

Leaves are alternate, small, 3 - 8 mm long, oval or elliptical with a pointed tip, leathery, dark green and shiny above, whitened beneath. The margins are entire and revolute.

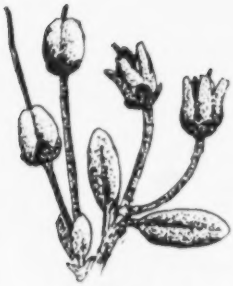
Flowers are deep pink, 5 - 6 mm long, like those of the Large Cranberry, in clusters of 1 - 4 arising from the ends of the branches. There is no leafy extension beyond the flowers. There are two bractlets near or below the middle of the flower stalk. Blooms from June to August.

Fruit are edible berries, 0.5 - 1 cm in diameter, pale and speckled at first, usually becoming red when ripe. They are quite variable in shape — subglobose, globose, ovate, and elliptical. Ripen in the fall. Berries that overwinter are superior in flavor.

Common in bogs and fens, wet heaths and other damp areas throughout Newfoundland and north to about 56 degrees latitude in Labrador.

The word Cranberry was originally crane berry, an early name given to the plant by New World Colonists because the flowers, which nod in the wind, resemble the head of a crane. These birds frequented the bogs where the Cranberries grew and feasted on the ripe berries.

Both species of Cranberry are highly esteemed for making jellies, jams, and drinks.



fruit

leaf

LAPLAND ROSEBAY, *Rhododendron lapponicum* (L.) Wahlenb.
Ericaceae

A dwarf, much-branched, matted or erect, evergreen shrub. Newer branches are reddish-brown and densely covered with rusty scales. Older branches are gray.

Leaves are alternate, oval or elliptical, thick and leathery, and 0.5 - 2 cm long. The uppersurface is dark green, wrinkled or pitted, and somewhat scurfy with light or reddish scales. The undersurface is light green and densely covered with yellowish-brown scales.

Flowers are deep purple or magenta, aromatic, 1 - 2 cm across, in few-flowered terminal clusters. They are somewhat bell-shaped, 5-lobed, and have 5 - 10 stamens. Blooms in late May and early June.

Fruit are oval-shaped capsules, 5 - 7 mm long, 5-parted, dark brown or purplish, scurfy, and on erect stalks.

Found on serpentine and limestone barrens, tablelands, heaths, and tundra of western Newfoundland, the Great Northern Peninsula, and Labrador.

TRAILING ARBUTUS, *Epigaea repens* L.
Ericaceae

A prostrate evergreen shrub, usually forming patches. Branches are green to reddish-brown and hairy.

Leaves are alternate, oval, rounded or heart-shaped at the base, 2.5 - 7 cm long, leathery and net-veined. Both surfaces are shiny but usually somewhat hairy, giving a rough feel to the surface. Margin and leafstalk are hairy.

Flowers are pink or white, fragrant, tube-shaped, the corolla expanded into a flat, 5-lobed border about 1.5 cm across. They form small clusters in the leaf axils and at the ends of the branches. Blooms from mid-May to late June.

Fruit are dry, 5-valved globular capsules containing many seeds.

Found on the floor of coniferous woods, on boggy barrens, serpentine slopes, limestone ledges and mountain tops. Recorded from west-central, western and southwestern Newfoundland.

Fernald, Kinsey and Rollins (1958) state that "The fragrant corollas of the Trailing Arbutus are spicy and slightly acid and are well known to children who eat them as a pleasant nibble and to relieve thirst."

flowers

fruit

EVERGREEN BEARBERRY, *Arctostaphylos uva-ursi* (L.) Spreng.
Ericaceae

A low evergreen shrub with numerous sprawling and spreading, flexible branches, forming extensive prostrate mats. New branchlets are covered with fine hairs and are sticky, but they become smooth later. Mature branches are smooth, dark reddish-brown or gray, with peeling papery bark. The variety *coactilis* Fern. & Macbr. has the young branchlets permanently fine-hairy but not sticky.

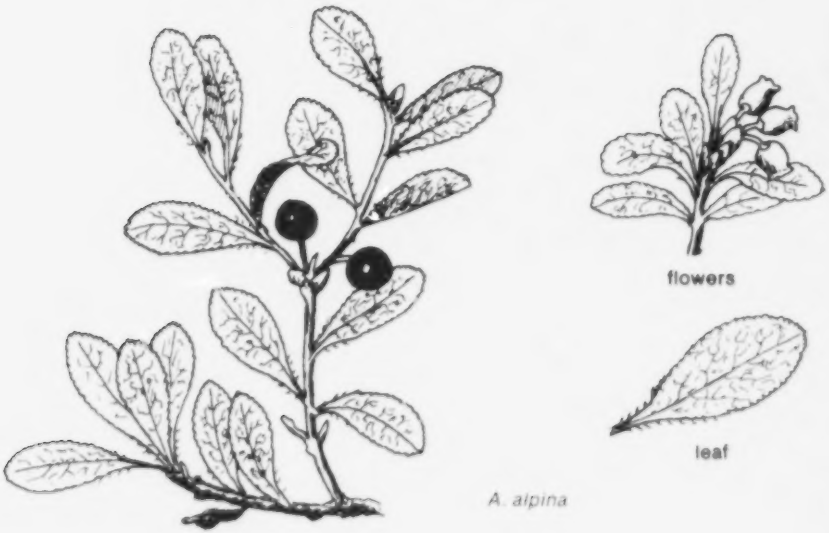
Leaves are alternate, entire, thick and leathery, 1.3 - 2 cm long, spatula-shaped and rounded at the tip, narrowing towards the base. Both surfaces are shiny and the margins are often fringed with tiny hairs. The uppersurface is dark green and the undersurface paler. In winter the undersurface is chocolate colored.

Flowers are urn-shaped, about 5 mm long, white or pale pink, in terminal clusters (racemes) of 4 or 5. The corolla has 5 rounded lobes that are rosy-tinged. There are 10 purple stamens. Blooms in June.

Fruit are bright red drupes, 7 - 8 mm in diameter, and capped by a persistent calyx. There is a single stone consisting of several nutlets. The fruit are edible but the mealy pulp is flavorless. Ripen by mid-August and remain on the bush throughout the winter.

Found throughout Newfoundland and southern Labrador on exposed heathlands, rocky barrens, talus slopes and the forest floor.

The fruit provide winter food for birds. Also, they are decorative for making Christmas wreaths.



A. alpina

ALPINE BEARBERRY, *Arctostaphylos alpina* (L.) Spreng.
Ericaceae

A matted, trailing shrub with smooth reddish-brown branches that are brittle and covered with shreddy papery bark. Buds are oval in shape and have wine-colored, sharp-pointed scales. Terminal buds are about 4 mm long and lateral buds are about 1 mm long. In winter, the old dry, withered leaves persist, often for several years.

Leaves are alternate, blunt-toothed, spatula-shaped, somewhat leathery, about 1.3 cm long, deeply-veined and wrinkled. They turn red and wither in the fall, then become brown in the winter. The blade is fringed with hairs at the base.

Flowers are small, urn-shaped, yellowish-green or white, in terminal clusters of 2 or 3. They expand with the leaves, emerging from scaly buds. Blooms from late May to mid-June.

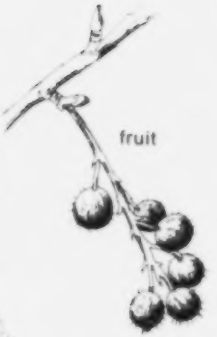
Fruit are black, shiny drupes containing 5 nutlets. They are juicy and edible but somewhat tasteless. Ripen by early August.

Found on acidic rocky and gravelly places around the coast and on higher hills throughout Newfoundland and Labrador.

RED BEARBERRY, *Arctostaphylos rubra* (Rehd. & Wils.) Fern.

Very similar to the above but branches are more ascending. The leaves are not deeply wrinkled, do not persist, and are not hairy-fringed. The fruit are scarlet and very juicy, considered better for eating than those of the Alpine Bearberry.

Occurs on limestone rocks and gravel of northern Newfoundland, along the south side of the Straits of Belle Isle. There are no records for Labrador.



SKUNK CURRANT

SWAMPY RED CURRANT

SKUNK CURRANT, *Ribes glandulosum* Grauer
Saxifragaceae

A reclining or sprawling shrub. Stems are smooth, gray or brownish, and without prickles. Buds are reddish and have less than 5 scales.

Leaves are alternate, palmately veined, divided into 5 lobes, usually double-toothed and 5 - 8 cm wide. The uppersurface is green and smooth (rarely with a few hairs), the undersurface being light green or whitened and with fine hairs. The leaves are heart-shaped at the base.

Flowers are white or reddish, in erect clusters (racemes), 2.5 - 5 cm long. There are 5 petals and 5 stamens. The flower stalks and the calyx are covered with glandular hairs. Blooms from mid-May to June.

Fruit are bristly red berries, 6 mm in diameter, borne in drooping clusters. They are edible. Ripen by late July.

Found in wet woods, swampy areas, clearings and rocky slopes, throughout Newfoundland and most of Labrador. This is the most common wild *Ribes* of this area. If the plant is bruised it gives off a skunky odor.

SWAMPY RED CURRANT, *Ribes triste* Pall.
Saxifragaceae

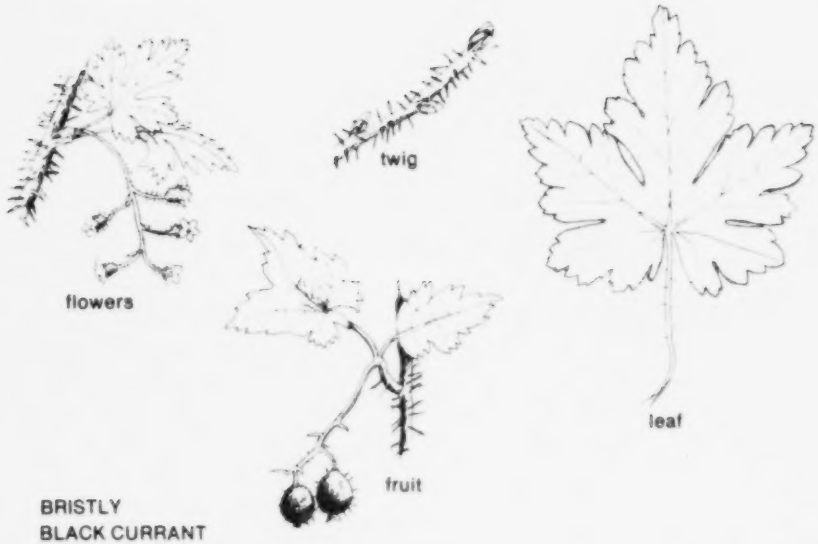
Similar to the above in growth habits. Stems are smooth and without prickles. Buds are brownish and have more than 5 scales.

Leaves are 5-lobed, 5 - 8 cm across and usually single-toothed, smooth above and usually hairy beneath. The lobes are not as deeply cut as in the Skunk Currant and the base is not as deeply heart-shaped.

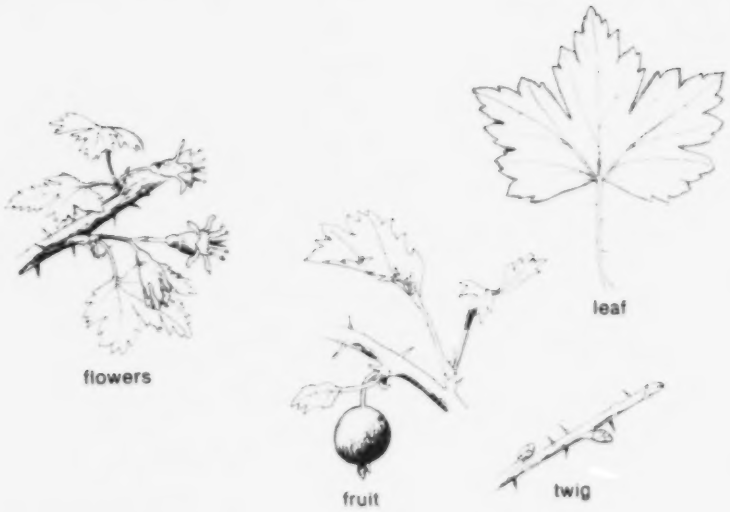
Flowers are greenish-purple, in drooping clusters 2.5 - 5 cm long. The flower stalks have glandular hairs. Blooms in June.

Fruit are smooth red berries and edible. Ripen by early August.

Found in damp woods and ravines. Recorded only from the West Coast, the Great Northern Peninsula, and southern and central Labrador.



BRISTLY
BLACK CURRANT



SMOOTH GOOSEBERRY

BRISTLY BLACK CURRANT, *Ribes lacustre* (Pers.) Poir.
Saxifragaceae

An erect shrub up to 1.5 m high. Twigs are yellowish and shiny and densely covered with bristly prickles and spines. Older branches have flaky bark and less prickles.

Leaves are alternate, palmately veined, deeply 3 - 5 lobed (more so than Smooth Gooseberry), and coarsely-toothed. They are heart-shaped at the base, and 2.5 - 6 cm across. Both surfaces are smooth or have a few scattered hairs. The margins are hairy-fringed. The leafstalks have scattered long hairs.

Flowers are green, tinged with purple, in loosely spreading or drooping clusters about 2.5 cm long. The flower stalks and the calyx are densely covered with glandular hairs. Blooms in June.

Fruit are bristly, dark purple or black berries about 6 mm in diameter and edible. Ripen in August.

Found in open woods, moist thickets, swamps and along shores throughout most of Newfoundland and southern Labrador. It has not been recorded from the Avalon Peninsula.

SMOOTH GOOSEBERRY, *Ribes hirtellum* Michx.
Saxifragaceae

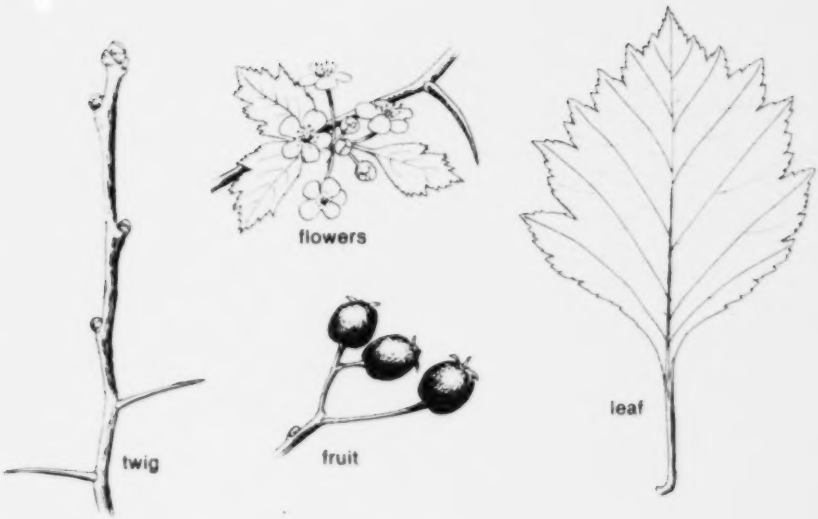
A straggling or upright shrub up to 1 m high. Twigs are grayish to brownish and dull, and have scattered prickles. Older branches usually have a few spines and flaky bark.

Leaves are alternate, palmately veined, deeply 3 - 5 lobed, coarsely toothed, truncate or heart-shaped at the base and 2.5 - 5 cm across. Both upper and lower surfaces are smooth or the lower surface may be somewhat hairy. The margins are hairy-fringed. The leafstalks have a few long hairs.

Flowers are in clusters of 2 - 4 among the upper leaves. The petals are white and the longer sepals are green. The 5 stamens extend beyond the corolla. The flower stalks and the calyx are hairless. Blooms in June.

Fruit are smooth, dark red or purplish berries, with a bloom, about 1.3 cm in diameter, and are solitary among the upper leaves. They are edible. Ripen by late August or early September.

Found along shores of brooks, and in moist thickets throughout Newfoundland. Probably occurs in southern Labrador.



HAWTHORNS, *Crataegus* spp.
Rosaceae

Dense, crooked shrubs or small trees. Twigs are more or less zigzag, shiny, reddish, marked by oblong lenticels, and usually armed with sharp thorns over 2 cm long. Spur branches are often present. Older bark is usually dark gray and scaly. Buds are small and rounded, covered by thick, reddish, and shiny scales.

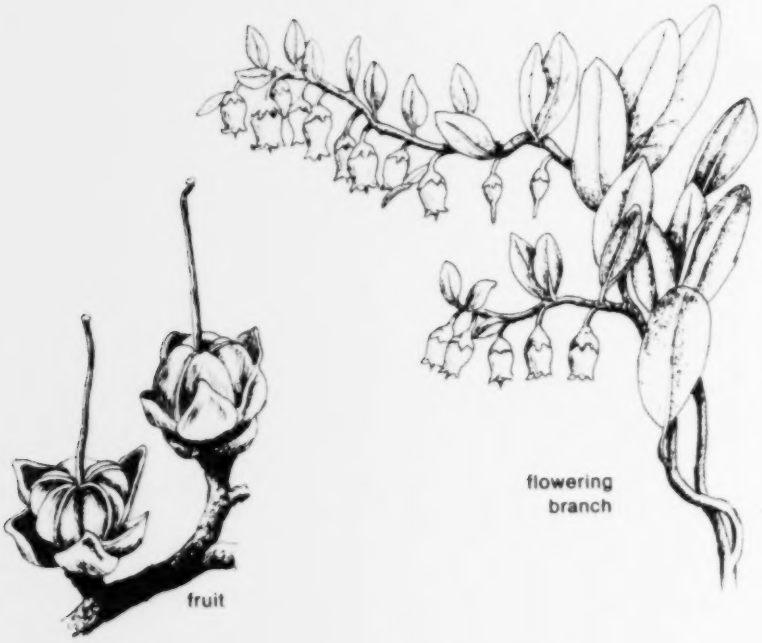
Leaves are alternate, variously shaped, mostly lobed and irregularly toothed. They are green and shiny above, lighter and usually fine-hairy beneath, 4 - 8 cm long.

Flowers are white, 1.2 - 2.5 cm across, with 5 petals and 5 - 20 stamens. Borne in showy clusters (corymbs) at the ends of the new branches. Blooms in June.

Fruit are yellow or reddish pomes (resemble apples), 1 cm in diameter, containing 1 - 5 bony nutlets and edible. Ripen in September.

Found along shores of brooks, at the edges of woods, and roadsides, and along river valleys. Uncommon throughout Newfoundland. The following species have been recorded: *C. brunetiana* Sarg., *C. macrosperma* Ashe, *C. chrysocarpa* Ashe, and *C. pruinosa* (Wendl.) K. Koch. The English Hawthorn, *C. monogyna* Jacq., has been introduced.

The Hawthorns are one of the most complexing genera of flowering plants. Identification into species is difficult, even for the specialist. Each species shows individual variations and there is hybridization with other species, further complicating the group. The genus itself is, however, quite distinctive.



LEATHERLEAF, *Chamaedaphne calyculata* (L.) Moench
Ericaceae

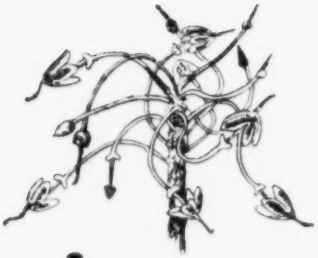
An evergreen shrub, 0.5 - 1 m high, often forming extensive patches. New shoots are covered with minute scurfy scales but older branches are smooth. In winter the leaf buds are small, rounded, and reddish-brown. Flower buds are present among the upper leaves being sharp-pointed and reddish. The white corollas are exposed by March. The four bud scales have hairy margins. The bark color is variable being green to reddish-brown.

Leaves are alternate, oblong, narrowed at the base and sharp-pointed or rounded at the tip, somewhat overlapping on the stem, leathery, and 0.5 - 3 cm long. The margins are slightly revolute and have obscure reddish teeth. The leaf surfaces are scurfy with tiny scales, especially beneath. The upper surface is dark green and the undersurface is yellowish. In winter, the leaves turn dark reddish or brown.

Flowers are white, bell or urn-shaped, forming drooping, one-sided leafy clusters (racemes) at the ends of the branches. Each flower is situated in the axil of a small leaf. The corolla is divided into 5 recurving teeth. There are 10 stamens. Blooms from mid-May to late June.

Fruit are small, many-seeded capsules that split into 5 valves. The seeds are shed in the fall, but the empty capsules remain longer.

Found on bogs and fens, around ponds and in other wet habitats, throughout Newfoundland and north to about 55 degrees latitude in Labrador.



fruit

flower

fruit

bud

LABRADOR TEA

uppersurface

undersurface

leaf

uppersurface

undersurface

NORTHERN LABRADOR TEA

LABRADOR TEA, *Ledum groenlandicum* Oeder
Ericaceae

An erect, free-branching, evergreen shrub usually less than 1 m high. New twigs are densely covered with brown hairs. Branches are reddish-brown to gray, often flaky on the older parts. Winter buds are rounded and have many overlapping scales. The large flower buds are terminal.

Leaves are alternate, thick and leathery, narrowly elliptic or oblong with a rounded apex, 1.5 - 5 cm long and 4 - 12 mm wide. The margin is entire and strongly revolute. The uppersurface is dull dark green, slightly hairy and scaly, and deeply veined. The undersurface has distinctive dense rusty hairs, giving a felt-like appearance. The leaves are usually crowded at the top of the shrub.

Flowers are creamy-white, 5-petaled, borne in terminal roundish clusters (umbels) 2 - 5 cm across. The flower stalks are straight or slightly curved. There are 5 - 8 stamens. Blooms from mid-June to early August.

Fruit are slender dry capsules about 6 mm long that split from the base upwards into 5 valves. They persist until the following year or longer.

Found throughout Newfoundland and Labrador in bogs and fens, wet and dry heaths, damp and dry woods, and more exposed areas.

The leaves can be used for making tea. They should be steeped in boiling hot water for 5 - 10 minutes. If the water is boiled after the leaves are put in, a harmful alkaloid is released.

NORTHERN LABRADOR TEA, *Ledum palustre* L.

Similar in habit to *L. groenlandicum* but smaller (10 - 20 cm high).

Leaves are narrow and linear, dark green and wrinkled above, densely rusty hairy beneath, strongly revolute, 1 - 1.5 cm long and about 2 mm wide.

Flowers are white, in terminal clusters about 3 cm across. There are 10 stamens. Blooms in July and August. The fruit are like those of *L. groenlandicum* but are only 3 - 4 mm long. The flower and fruit stalks are sharply bent near the ends.

Found on dry hills and rocky barrens of Labrador. There are no records for insular Newfoundland.

BOG ROSEMARY, *Andromeda glaucophylla* Link
Ericaceae

A low, slender, evergreen shrub arising from a creeping rootstalk. Stems are smooth and usually whitened with a bloom.

Leaves are alternate, narrow and linear, often with a sharp-pointed tip, leathery, and 1.3 - 3 cm long. They are dull green and have whitened depressed veins above; whitened with fine hairs beneath. The margins are entire and strongly revolute. The midvein is furrowed above and prominent beneath. The leaves are crowded towards the twig ends.

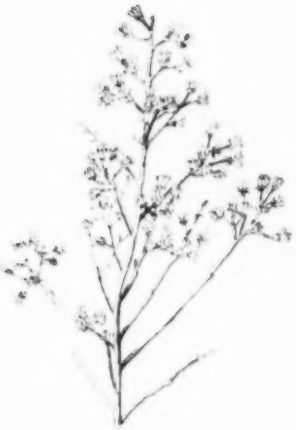
Flowers are small, about 6 mm long, urn-shaped, in nodding terminal clusters (umbels) of 3 - 7. The pink or white corolla has 5 rose-colored tips. There are ten stamens. The flower stalks are 1 - 1½ times the length of the corolla. Blooms in June and July.

Fruit are flattened, globe-shaped, 5-parted capsules

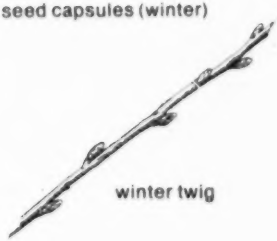
Found on bogs, fens, and wet heaths throughout Newfoundland and Labrador.

May be confused with Bog Laurel, *Kalmia polifolia*, which has opposite shiny leaves and saucer-shaped flowers.

Andromeda polifolia L. has been recorded from Labrador. It resembles the above species but the leaves beneath are hairless and usually whitened with a 'bloom'. The flower stalks are 2 - 3 times the length of the corolla.



seed capsules (winter)



winter twig

MEADOWSWEET, *Spiraea latifolia* (Ait.) Borkh.
Rosaceae

An erect shrub usually 0.6 - 1.2 m high. Stems are reddish or brownish-purple, smooth and often ridged. The older bark is papery. Buds are small and similar in color to the twigs.

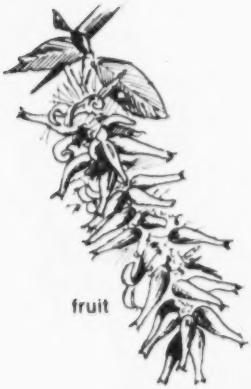
Leaves are alternate, oval, oblong or inversely ovate, wedge-shaped or rounded at the base, and rounded or sharp-pointed at the tip, 2.5 - 7 cm long and coarsely toothed. Both surfaces are hairless. In autumn the leaves turn yellow or apricot in color.

Flowers are white or pink, in erect, open or compact, pyramidal to ovoid clusters (panicles), 5 - 12 cm high. Each flower has 5 petals and 10 - 50 stamens. The stamens are long, giving the flower cluster a fuzzy appearance. Blooms from mid-July to late September.

Fruit are small, dry, 5-parted capsules that persist through the winter, a useful identifying characteristic at that season.

Found in a variety of habitats — old fields, damp meadows, stream banks, rocky slopes, the edge of clearings and along roadsides. It often forms extensive thickets. Occurs throughout most of Newfoundland but absent from the Great Northern Peninsula and Labrador.

pussy willow



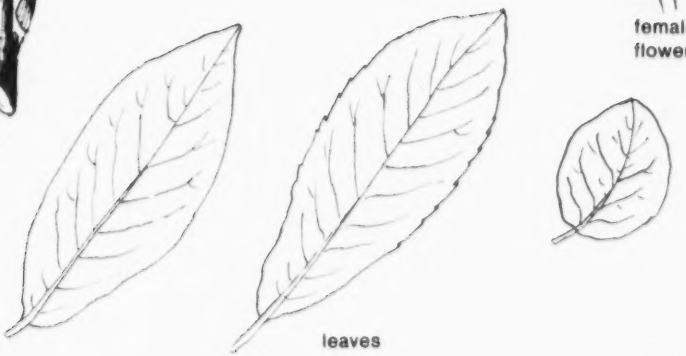
fruit

pine cone gall

buds

male flower

female flower



leaves

WILLOWS, *Salix spp.*
Salicaceae

Thirty-three native species of Willow have been recorded from Newfoundland and Labrador. Ten of these species are found only in Newfoundland, and three of them occur only in Labrador; the other twenty species are common to both areas. About two-thirds of the Willows in insular Newfoundland occur on the West Coast, west-central areas, and the Great Northern Peninsula. A complete list of the species from our area is given in Appendix I.

Willows are a difficult group to identify into species. They show much individual variation, especially in leaf shape, and frequently hybridize; hence, botanists vary in opinion as to the number of species. It seems practical, therefore, to include only a description of the genus and some comments on Willows in general.

Most Willows are shrubs, some are low-lying and creep along the ground, and some may reach tree height. Twigs of Willows are usually slender and have alternate, one-scaled buds. The buds are pressed against the twigs and are rounded on the outside.

Leaves are alternate and variable in shape. Most species have thin, elliptical, oval, spatula-shaped, or lanceolate leaves that have toothed margins and short leafstalks. A few of the dwarf species have rounded or heart-shaped leaves. The leaves are usually shiny and dark green above, dull and paler beneath. Some species have stipules on the twig at the base of the leafstalk, but they often wither before the leaves have fully expanded.

Flowers are erect catkins, the male and female borne on separate plants appearing before, with, or after the leaves. Each small flower of the catkin is subtended by a scale that is often hairy, giving the catkins a fuzzy appearance. Male flowers have 2 - 8 stamens that are yellow or tinged with red. Female flowers consists of a single pistil often grayish-green in color. Blooms in May or June.

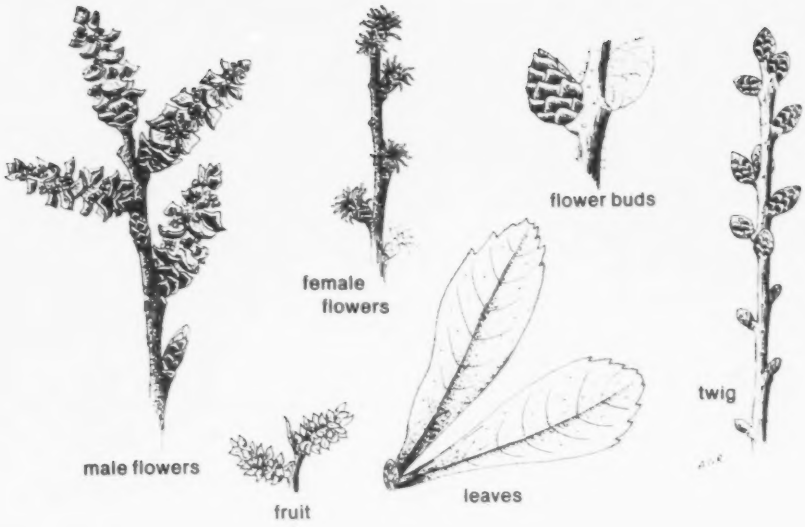
Fruit are 2-valved capsules containing many minute, hairy seeds which mature by summer and are dispersed by the wind.

Willows prefer moist soils and are commonly found along river and stream banks, in wet thickets and swampy areas. Dwarf species, however, occur in drier exposed habitats.

The two commonest Willows in Newfoundland are those popularly known as Pussy Willows, *S. discolor* Muhl. and *S. bebbiana* Sarg. The fuzzy male catkins expand early and are considered a harbinger of spring. The branches can be brought indoors in late winter and forced into bloom.

Willows are important food for some of our wildlife. The twigs and bark are eaten by moose, beaver, muskrat and snowshoe hare; the leaves and buds are eaten by ptarmigan, ruffed grouse and grosbeaks.

Galls, shaped like pine cones, are frequently found at the ends of Willow twigs. These are caused by a midge *Cecidomyia sp.*, which lays its eggs on the opening buds in the spring.



SWEETGALE, BOG-MYRTLE, *Myrica gale* L.
Myricaceae

An erect shrub 1 - 1.5 m high. New twigs are hairy and glandular-dotted. Older branches are shiny, chestnut brown in color, and dotted with white lenticels. Winter twigs are shiny and have sharp-pointed buds that have many overlapping scales. The bud scales are dark at the base and have white margins. Male flower buds are larger than the leaf buds and clustered towards the twig ends.

Leaves are alternate, spatula-shaped, usually rounded at the tip, tapering at the base to a short petiole, and 2.5 - 6 cm long. Both surfaces are hairy and glandular dotted, the uppersurface being grayish-green and the undersurface paler. The variety *subglabra* (Chev.) Fern. has the leaves hairless or nearly so. Margins are entire except towards the tip where it is conspicuously toothed. The leaves are crowded towards the upper part of the branches.

Flowers are catkins, the sexes usually on separate plants. Male catkins are quite distinctive, about 1.2 cm long, yellowish with reddish scales, and crowded at the end of the twig. Female catkins are less noticeable. They are not as numerous as the male catkins, small (about 3 mm long) and have ruby-red styles. Blooms from late April through May before the leaves expand.

Fruit are conelike clusters of small, yellowish-green, resin-dotted nutlets about 1 cm long. Ripen in August.

Found on bogs and fens, around ponds, along brooks and streams, and other wet areas. Very common throughout Newfoundland and it occurs north to about 57 degrees latitude in Labrador.

The dried leaves can be used as a substitute for tea and as a flavoring for meat. The nutlets can be used as a spice.

male flowers

fruit

leaf

BAYBERRY, *Myrica pensylvanica* Loisel.
Myricaceae

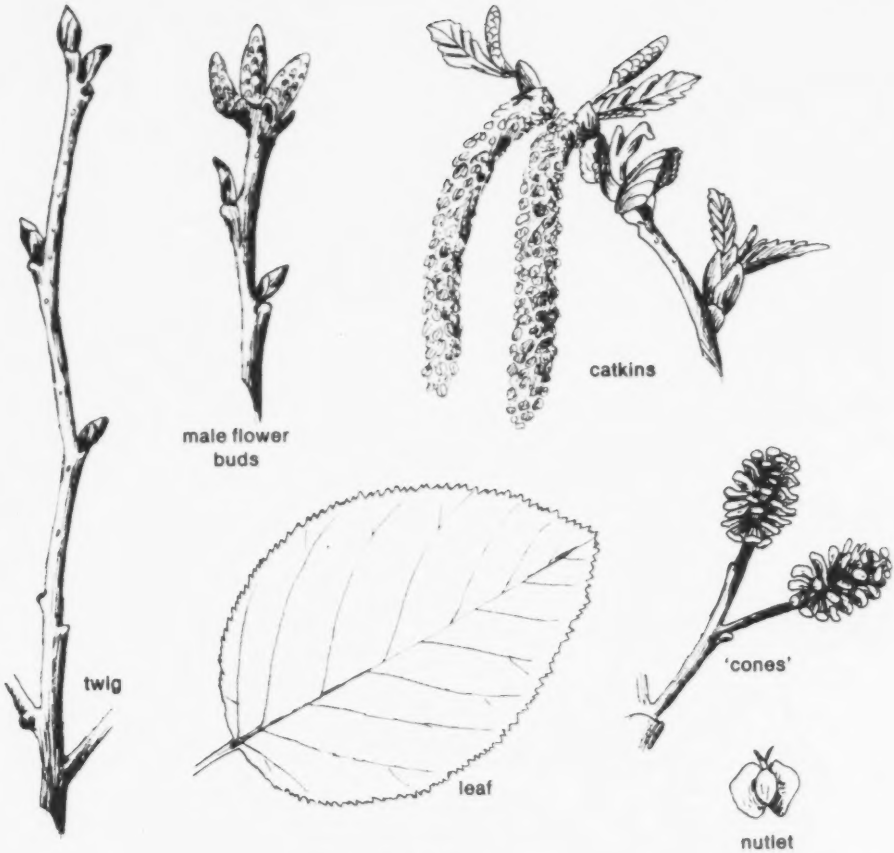
An upright, stiffly branched shrub up to 1.5 m high. New twigs are hairy and covered with small yellow dots. Older twigs are contorted, grayish colored and have scattered horizontal whitish lenticels. Buds are small, rounded, and reddish.

Leaves are alternate, elliptical or oval, often broadest towards the tip and wedge-shaped at the base, 1.2 - 5 cm long. The tip usually has a small point. Both surfaces are shiny, the uppersurface bright green tinged with red, hairy and glandular-dotted; the undersurface lighter, densely covered with glandular dots and with scattered hairs. Margins are entire or slightly undulating and often have coarse teeth towards the tip.

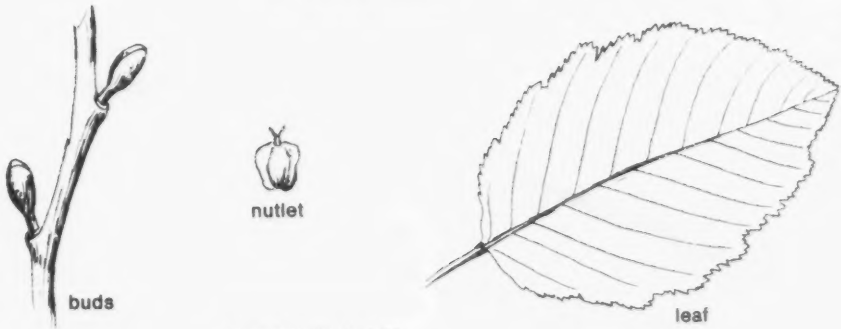
Flowers are catkins that are borne below the expanding leaves. The sexes are on separate plants, and both are like those of *M. gale*. Blooms in late June or early July.

Fruit are clusters of bony, globular nutlets, about 4 mm in diameter, borne on short stalks below the leaves. They are covered with a pale gray or whitish wax. Ripen by August and may persist for 2 or 3 years.

Found at the edges of small ponds and on dry barrens near the coast. It is rare in Newfoundland, recorded only from the southern part of the west coast and on the south coast east to the Burin Peninsula.



MOUNTAIN ALDER



SPECKLED ALDER

MOUNTAIN ALDER, *Alnus crispa* (Ait.) Pursh
Corylaceae

An upright coarse shrub commonly up to 3 m in height. The trunks are clumped and curve outwards from the base. Twigs are smooth or hairy, brownish and somewhat sticky and have a few scattered whitish lenticels. Older stems are smooth and grayish. Buds are sharp-pointed, dark chestnut-brown, not stalked, and have 3 - 4 scales.

Leaves are alternate, oval or ovate, 4 - 8 cm long, rounded or heart-shaped at the base, and finely sharp-toothed. The leaf surface is dark green, hairless and wrinkled above, light green and shiny beneath. The main veins beneath are brown and usually have hairs. The variety *mollis* Fern. has the leaves permanently covered with soft hairs beneath. There are 7 - 8 pair of veins to each leaf. The cross veins do not join.

Flowers are catkins, both sexes being on the same plant. Male catkins are long (4 - 6 cm) and drooping, yellowish, and at the ends of the branches. Female catkins are smaller (about 1 cm long) and erect, green with reddish styles, and expand from lateral buds. Blooms during April and May as the leaves expand. Only the male catkins are exposed in the winter. Female catkins are protected in the buds.

Fruit are small winged nutlets borne in oval, woody 'cones', 1 - 2 cm long. Nutlets mature in the fall but the 'cones' often persist for a year or more.

Found along roadsides, stream banks, pond fringes, in wet thickets and swamps, on rocky slopes and in other dry areas. Occurs throughout Newfoundland and Labrador.

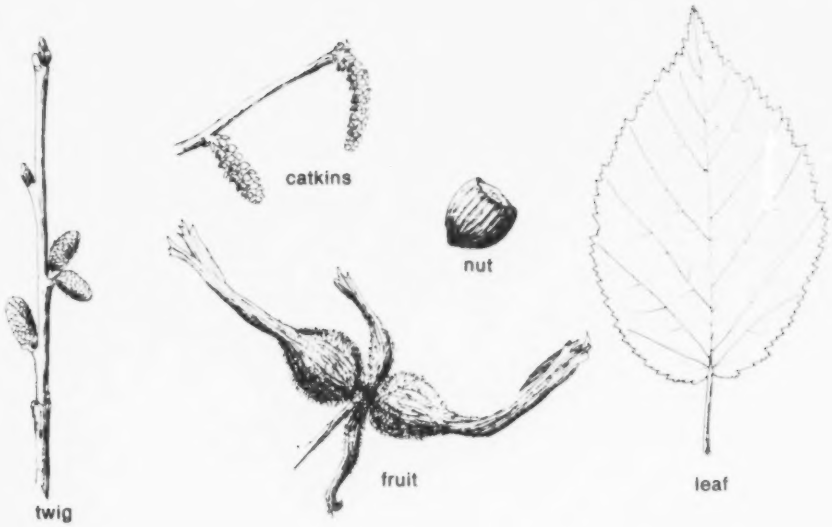
SPECKLED ALDER, *Alnus rugosa* (Du Roi) Spreng.
Corylaceae

Similar in habits to *A. crispa* but often attains heights of 3.5 m or more. Twigs are smooth, or somewhat hairy, reddish-brown, and have scattered white lenticels. Older stems are smooth and brownish. Buds are blunt-tipped, dark reddish-brown, stalked, and have 2 scales.

Leaves are alternate and shaped like those of *A. crispa*. They are dark green, hairless and wrinkled above, whitened and dull, and often somewhat hairy, beneath. The main veins beneath are brown and hairy. The margin is double-toothed and often undulating. There are 10 or more pair of veins to each leaf. Also, the cross veins are prominent beneath, joining to form a ladder-like pattern.

Flowers are like those of *A. crispa*. Both male and female catkins are exposed, however, in the winter. Blooms in April or May before the leaves expand.

Found in wet places — swamps, stream margins and other low-lying areas. It is not as widely distributed as *A. crispa* in Newfoundland, being absent from the Avalon Peninsula and the Great Northern Peninsula. In Labrador it occurs mostly in the central forested areas ranging as far north as 55 degrees latitude.



BEAKED HAZELNUT, *Corylus cornuta* Marsh.
Corylaceae

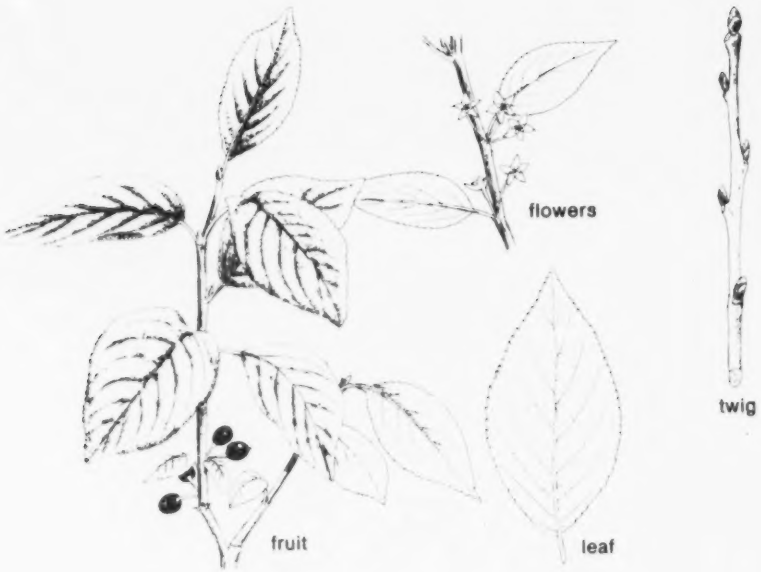
A small to medium-sized shrub. New twigs are yellowish-brown, and slightly hairy or smooth. Older branches are dark brown and rough. Buds are rounded and have 2 pairs of equal scales: the inner pair are light-colored and as long as the bud; the outer pair are dark and shorter.

Leaves are alternate, oval or heart-shaped, taper-pointed at the apex and 5 - 10 cm long. They are bright green and slightly hairy above; paler, and hairy or downy beneath. The veins are depressed above and prominent beneath. The margin is irregularly and sharply toothed. In autumn the leaves turn bright yellow.

Flowers are catkins, both sexes being on the same plant. Male catkins are long, pendulous and greenish-yellow, appearing before the leaves. They are not terminal. Female catkins are short, consisting of red-tipped stigmas projecting beyond the scales. Blooms in May or early June.

Fruit are rounded, pale brown nuts, about 1.3 cm in diameter, edible and sweet and borne in clusters of 2 or 3. They are contained in hairy husks that have a long tubular beak. Ripen in late summer or early fall.

Found in thickets and clearings, on the borders of woods, banks of streams and along shores throughout most of Newfoundland. There are no records for the Great Northern Peninsula and it is not found in Labrador.



ALDER-LEAVED BUCKTHORN, *Rhamnus alnifolia* L'Her
Rhamnaceae

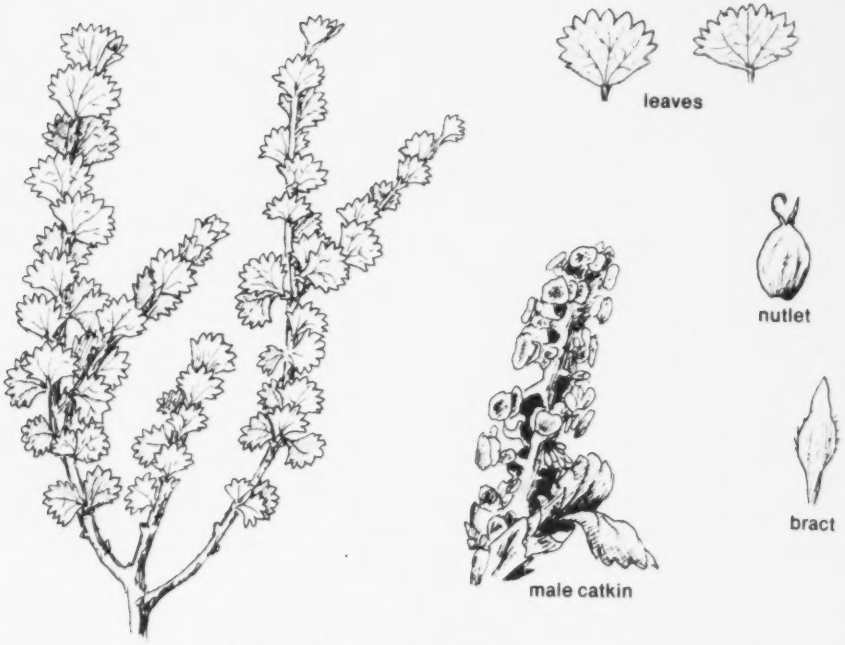
An ascending or spreading shrub up to 1 m high. Twigs are smooth and greenish at first but reddish later. Buds are covered with several dark, shiny, scales.

Leaves are alternate, oval or elliptical, fine-toothed, 5-8 cm long, smooth on both surfaces, shiny dark green above and paler beneath. The veins tend to follow the leaf margins.

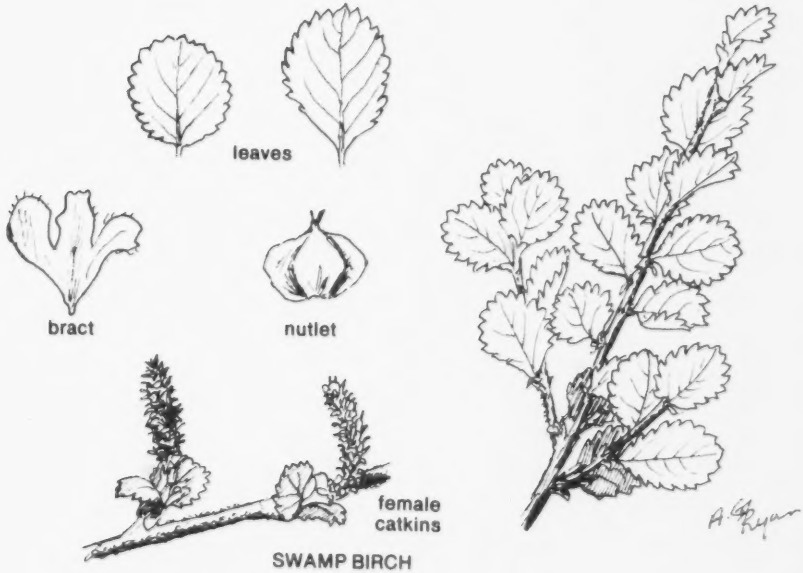
Flowers are small and greenish, about 3 mm across, on short stalks, and clustered or solitary in the leaf axils. Each flower may have a pistil and stamens or the pistil and stamens may be in different flowers, in which case they may be on the same plant or different plants. There are 5 sepals and 5 stamens. Blooms from mid-June to mid-July.

Fruit are fleshy, black, berry-like drupes, about 6 mm in diameter, containing 3 flat nutlets and are borne in small clusters. They are not considered edible. Ripen by mid-August.

Found in wet coniferous woods and thickets, dry and wet peaty places, and on rocky slopes. Recorded from the West Coast, the Great Northern Peninsula, and central areas east to Gander.



NEWFOUNDLAND DWARF BIRCH



SWAMP BIRCH

DWARF BIRCHES, *Betula* spp.
Corylaceae

There are five birches in Newfoundland and Labrador that are shrubs. The White Birch, *B. papyrifera*, usually considered a tree, is frequently dwarfed in exposed habitats and it might then be confused with Dwarf White Birch, *B. minor*. In White Birch the young vegetative shoots are hairy and the vein axils of the undersurface of the leaves are hairy whereas in Dwarf White Birch the young shoots are hairless and glandular and the undersurface of the leaves hairless.

In the descriptions that follow identification is based on twig, leaf, and fruiting characteristics. In all species the flowers are catkins that bloom before or as the leaves expand, usually in June. Each catkin has male or female flowers, not both. The sexes occur, however, on the same plant. Male catkins are long and often drooping when mature. Female catkins are smaller and erect. By late summer fruiting bodies, commonly called 'cones', are formed. These consist of a large number of bracts, usually 3-lobed, that are closely packed one above the other about a central axis. Two or three nutlets lie above each bract.

Winter buds of the birches are sharp-pointed with 2 or 3 scales.

NEWFOUNDLAND DWARF BIRCH, *Betula michauxii* Spach

A spreading and much-branched shrub with creeping underground stems, the erect branches up to 0.6 m high. Twigs are densely covered with short light brown hairs. Older branches are dark brown and shiny.

Leaves are alternate, broadly fan-shaped, 0.5 - 1.3 cm long and about as broad, hairless, shiny and leathery, coarsely toothed and net-veined. They are overlapping along the branches.

The nutlets do not have wings and the bracts are unlobed.

Found on bogs and fens throughout Newfoundland and as far north as 55 degrees latitude in Labrador.

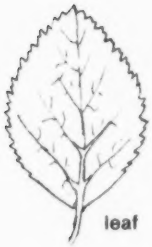
SWAMP BIRCH, *Betula pumila* L.

A prostrate or erect shrub up to 2.5 m high. Twigs are densely covered with light brown hairs. Older branches are dark, hairless, and shiny.

Leaves are alternate, oval, circular, or inversely ovate, 1 - 3 cm long, coarsely toothed, and finely net-veined. The uppersurface is shiny with hairs along the main veins, the undersurface paler and hairy.

Cones are erect, on short stalks, oblong-cylindrical, and 1 - 1.5 cm long. Bracts have 3 ascending lobes. The wings are half to barely as wide as the nutlet.

Found mostly on bogs and fens throughout Newfoundland and as far north as 55 degrees latitude in Labrador.



leaf

nutlet

bract

NORTHERN BIRCH

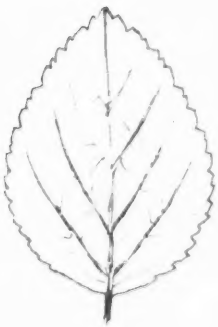
leaf

nutlet

bract

twig

TUNDRA DWARF BIRCH



leaf

nutlet

bract

DWARF WHITE BIRCH

NORTHERN BIRCH, *Betula borealis* Spach

A coarse, upright or depressed shrub, up to 2 m high. New shoots are densely covered with white hairs. Twigs are sparsely hairy. Older bark is dark and shiny.

Leaves are alternate, elliptical, broadly ovate, or oval, 1 - 4 cm long, coarsely toothed, hairy on both surfaces when young, more or less so beneath when mature.

Cones are erect, oblong or oval in shape, and 1 - 2 cm long. Bracts have 3 ascending lobes. The wings are nearly as broad to about as broad as the nutlet.

Found on hillsides, talus slopes, limestone barrens and magnesian soils, and woods and thickets of western, southwestern, north-central, and northern Newfoundland, and Labrador.

TUNDRA DWARF BIRCH, *Betula glandulosa* Michx.

A depressed or erect shrub up to 2 m high. Twigs are smooth or with a few small hairs, and are covered with glandular dots. Older bark is dark brown and shiny, and has scattered lenticels.

Leaves are alternate, oval, round or inversely ovate, 1 - 2.5 cm long, irregularly and coarsely toothed, shiny, mostly hairless, and leathery on both surfaces, dark green above, paler beneath.

Cones are erect, on long stalks, oblong, and 1 - 1.5 cm long. Bracts have 3 ascending lobes. The wings are narrow, less than half the width of the nutlet.

Found on windswept barrens, hillsides and mountains of western, west-central and northern Newfoundland, and Labrador.

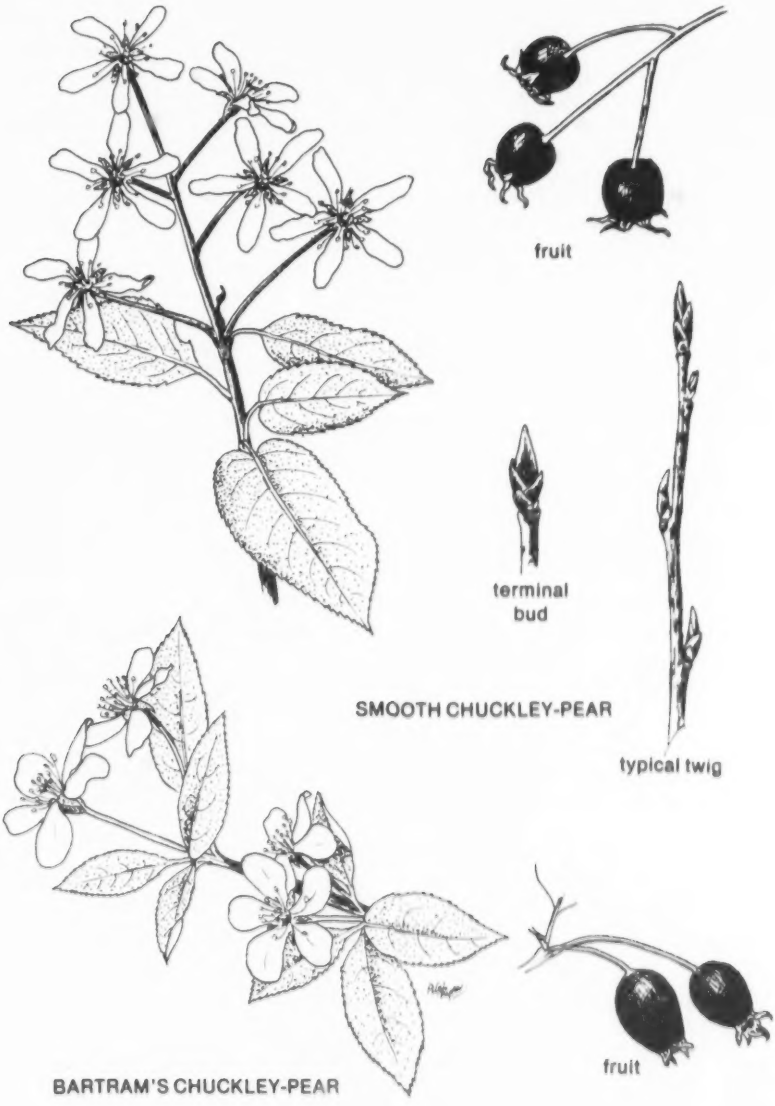
DWARF WHITE BIRCH, *Betula minor* (Tuckerm.) Fern.

A coarse shrub up to 2 m high. Twigs are hairless and often covered with glandular dots. Older bark is dark brown and shiny.

Leaves are alternate, ovate, 1.5 - 5 cm long, coarsely toothed, shiny, hairless and often sitcky on both surfaces, and lighter underneath.

Cones are erect, on short stalks, oblong-oval, and 1.5 - 3.5 cm long. Bracts have 3 ascending lobes. The wings are as broad as or broader than the nutlet.

Found on rocky barrens, turfy and rocky slopes, alpine crests, and in damp hillside thickets of western and northern Newfoundland, and southern Labrador.


fruit
terminal bud
typical twig
SMOOTH CHUCKLEY-PEAR
fruit
BARTRAM'S CHUCKLEY-PEAR

CHUCKLEY-PEARS, *Amelanchier spp.*
Rosaceae

Erect, or straggling, much-branched shrubs up to 3 m high. Twigs are slender, brown to reddish, with a scaling whitish film and scattered lenticels. The pith is slightly 5-sided in cross-section. Buds are sharp-pointed and pressed against the twig. Both terminal and lateral buds are prominent, the terminal bud being slightly larger. Bud scales are shiny, green to red, mostly sharp-pointed, and usually hairy-fringed.

Leaves are alternate, elliptical, oval, oblong, or ovate, rounded or somewhat heart-shaped at the base, mostly pointed at the tip, and usually less than 5 cm long. The margins are finely or coarsely toothed.

Flowers are white and showy, 2 - 3 cm across, borne in erect or drooping clusters (racemes). There are 5 petals and about 20 stamens. Blooms from mid-May to late June before the leaves are full grown.

Fruit are reddish or dark purple berry-like pomes with 5 conspicuous calyx-lobes at the top. They are about 1 cm in diameter and edible, being juicy and sweet. Ripen by late July or early August. The fruit are sometimes quite plentiful but are often infected by Cedar Apple Rust, *Gymnosporangium spp.*, a fungus disease.

Found in a variety of habitats including clearings, borders of woods, thickets, swamps, and along shores and stream banks.

Chuckley-pears are also known as Juneberries, Serviceberries, Shadbushes, Saskatoons, and Sarvis. In Newfoundland they are also called Wild Pears and Indian Pears.

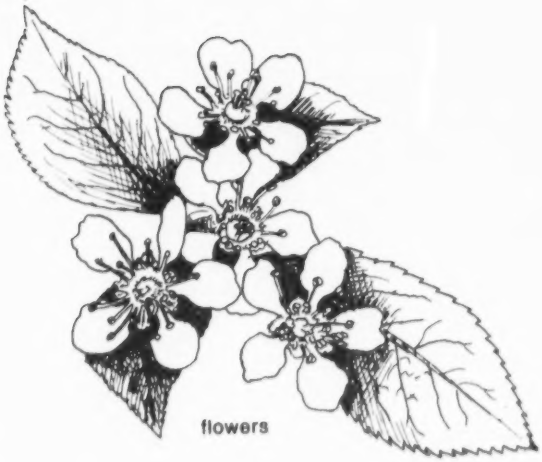
The Chuckley-pears are difficult to identify, the species having minor individual differences and sometimes hybridizing. There seems to be no consensus as to the actual number of species present in eastern North America. The two floras covering this area differ markedly in this regard. Fernald (1950) identifies 19 species whereas Gleason (1968) identifies only 8 species. There have been no recent studies of the group, and many complexities remain.

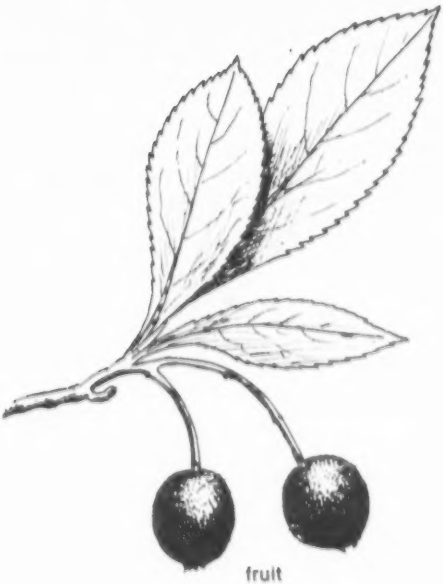
Rouleau (1956) records 6 species as occurring in Newfoundland:

Bartram's Chuckley-pear	*A. bartramiana* (Taush) Roemer
Fernald's Chuckley-pear	*A. fernaldii* Wiegand
Swamp Chuckley-pear	*A. intermedia* Spach
Smooth Chuckley-pear	*A. laevis* Wiegand
Running Chuckley-pear	*A. stolonifera* Wiegand
Wiegand's Chuckley-pear	*A. wiegandii* Nielsen

A. bartramiana has been recorded from Labrador.

Only one of the Chuckley-pears is fairly distinctive. Bartram's Chuckley-pear, *A. bartramiana*, has the flowers (and fruit) solitary, or just a few together with one being terminal and the others in the axils of the upper leaves. The other species have the flowers and fruit arranged in distinct racemes.





PURPLE CHOKEBERRY

CHOKEBERRIES, *Aronia spp.*
Rosaceae

Slender and free-branching shrubs usually less than 1.5 m high. Twigs are gray to light brown, have a few scattered lenticels, and in most of our plants are densely covered with white curly hairs. Older branches are smooth, mostly covered with a whitish film. Buds are slender and sharp-pointed. Only the terminal buds are prominent, the lateral buds being small and pressed against the twig. Bud scales are shiny and dark red, and usually have two notches at the tip.

Leaves are alternate, elliptic or inversely ovate, usually tapering to the base and abruptly pointed at the tip. They are 2.5 - 5 cm long, fine-toothed, dark green and shiny above, paler and hairy beneath in most of our plants. The midvein has tiny, raised, dark glands along the upper side.

Flowers are white or slightly pink, borne in terminal flat-topped clusters (cymes), 2.5 - 4 cm across. There are 5 rounded petals and usually 20 stamens. Blooms in June or July.

Fruit are edible, berry-like pomes, 8 - 10 mm in diameter. Ripen by mid-September and often remain on the bush into winter.

Found in various habitats including wet and dry thickets, heaths, bogs and fens, swamps, and wet woods.

The Chokeberries are usually divided into three species:

RED CHOKEBERRY, *Aronia arbutifolia* (L.) Ell.

The twigs, flower stalks, and undersurface of the leaves are densely woolly. The fruit are bright red and ripen late. It is not known to occur in Newfoundland or Labrador but has been reported from the French islands of St. Pierre and Miquelon.

BLACK CHOKEBERRY, *Aronia melanocarpa* (Michx.) Ell.

The twigs, flower stalks, and undersurface of the leaves are smooth and hairless. The fruit are black and ripen early. There are records of this species throughout Newfoundland but it appears to be uncommon.

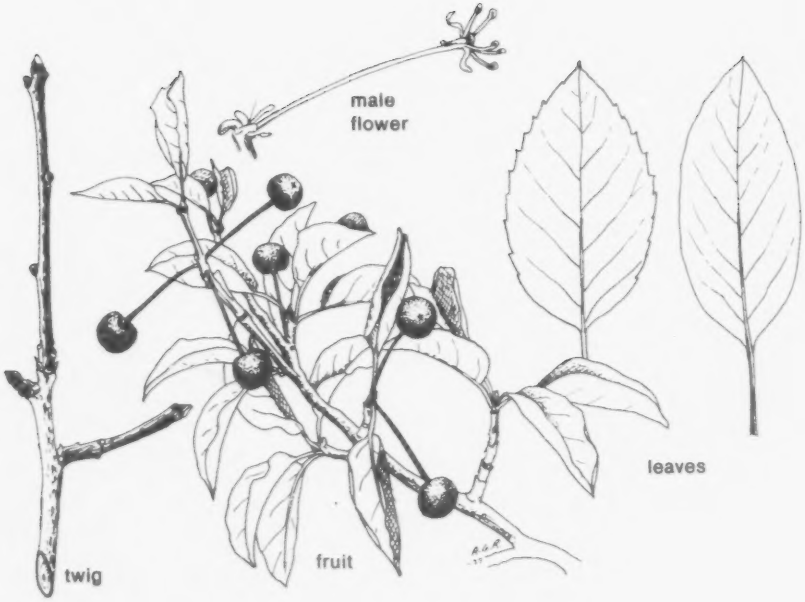
PURPLE CHOKEBERRY, *Aronia prunifolia* (Marsh) Rehder

Somewhat intermediate between the first two. It is typically less hairy than the Red Chokeberry and has dark purple or purplish-black fruit that ripen early. Found throughout Newfoundland.

In a recent paper, Hardin (1973) prefers "formally to recognize only *A. arbutifolia* and *A. melanocarpa.*" The third entity, *A. prunifolia*, is considered a hybrid between the first two. He suggests that the only reliable character for identifying the Chokeberries is the color of the fruit. There are continuous variations in nearly all the other features.

It appears, from field observations and herbarium specimens, that the common Chokeberry found in Newfoundland is somewhat different from any of the above three species. It seems to fit the description of *A. prunifolia* best. The flower stalks and twigs are woolly. The leaves are shiny above and white-woolly beneath, and turn scarlet in the fall. (Hardin states that "*Aronia arbutifolia* is the only species developing a deep scarlet color" in the fall.) The fruit are black, usually covered with a slight fuzz, and ripen in September.

For a more thorough treatment of the complexities in the Chokeberries, the reader is referred to Hardin's paper listed in the references.



MOUNTAIN-HOLLY, *Nemopanthus mucronata* (L.) Trel.
Aquifoliaceae

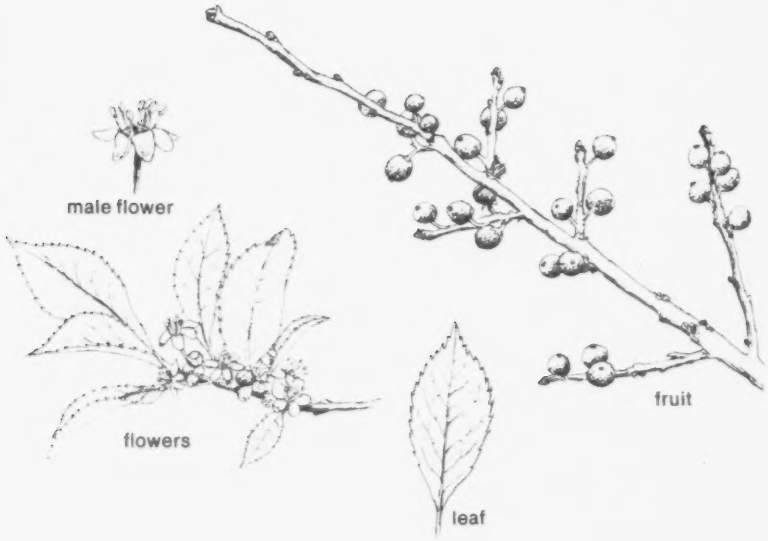
A medium-sized shrub with frequent branching and ashy-gray or greenish bark. The young, smooth, purplish-brown twigs have many small white lenticels. Terminal buds are sharp-pointed and have 2 - 3 dark purplish scales. The lateral buds have rounded scales. There is 1 bundle scar for each leaf scar.

Leaves are alternate, oblong to elliptical, smooth and thin, 2.5 - 8 cm long, entire or rarely toothed, and usually with a short sharp point. They are light yellowish-green when full grown. The purple leafstalk is 0.6 - 2 cm long. In autumn the leaves turn yellow or brown.

Flowers are small, 6 mm across, yellowish, 4 or 5-petaled, solitary or in clusters (often 5) and borne on slender stalks arising from the leaf axils. Male and female flowers are usually on separate plants, but may be on the same plant. Blooms in June.

Fruit are dull red or pale yellow drupes with a bluish bloom, about 6 mm in diameter, containing 4 or 5 nutlets and borne on slender stalks. They are not considered edible. Ripen by mid-August.

Found in damp thickets, swamps, bogs and wet woods, and occurs in more exposed habitats such as heaths. Found throughout Newfoundland but is rare on the Great Northern Peninsula. It is not found in Labrador.



WINTERBERRY HOLLY, *Ilex verticillata* (L.) Gray
Aquifoliaceae

A clumped shrub 1-3 mm high. Twigs are pale brown to gray, and smooth or slightly fuzzy. Buds are small and blunt, brown, and have broadly rounded scales. Older branches are dull gray.

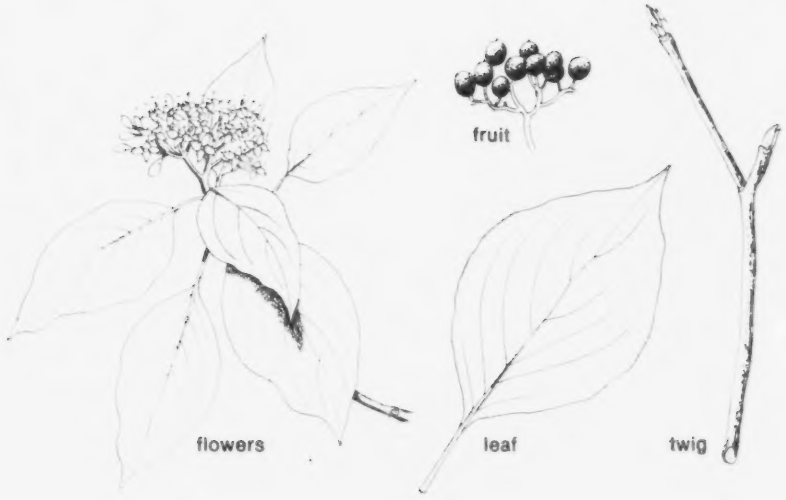
Leaves are alternate, elliptical, oval or spatula-shaped, sharp-pointed at the tip and wedge-shaped at the base, sharply toothed, and 1.3-5 cm long. They are dull green and smooth above, somewhat lighter and smooth or slightly fuzzy beneath. In the fall they turn yellow and dark brown before dropping.

Flowers are small, greenish-white, forming clusters of 3-12 in the leaf axils. Male and female flowers are on separate plants. There are 4-7 petals and male flowers have an equal number of yellow stamens. Blooms from mid-July to mid-August.

Fruit are conspicuous clusters of orange to vermillion-colored globular drupes about 6 mm in diameter, solitary or in clusters of 2 to 3 on short stout stalks. Some plants, of the form *chrysocarpa* Robins, have yellow fruit. Ripen in November and remain on the bush until January.

Found in swamps, moist woods, damp thickets, along stream banks, and other wet habitats. Found only as localized colonies in Newfoundland.

This is the nearest relative we have to the American Holly, *Ilex opaca* Ait. It is a very attractive plant in the late fall and early winter when the colorful fruit are clinging to the naked branches.



ALTERNATE-LEAVED DOGWOOD, *Cornus alternifolia* L.f
Cornaceae

An upright shrub with spreading branches, usually less than 1.5 m high. Twigs are smooth and shiny, greenish-red, and have a white pith. Older bark is green with light brown lenticels. Branches and buds are alternate. Buds are small and pointed and have 2 reddish scales.

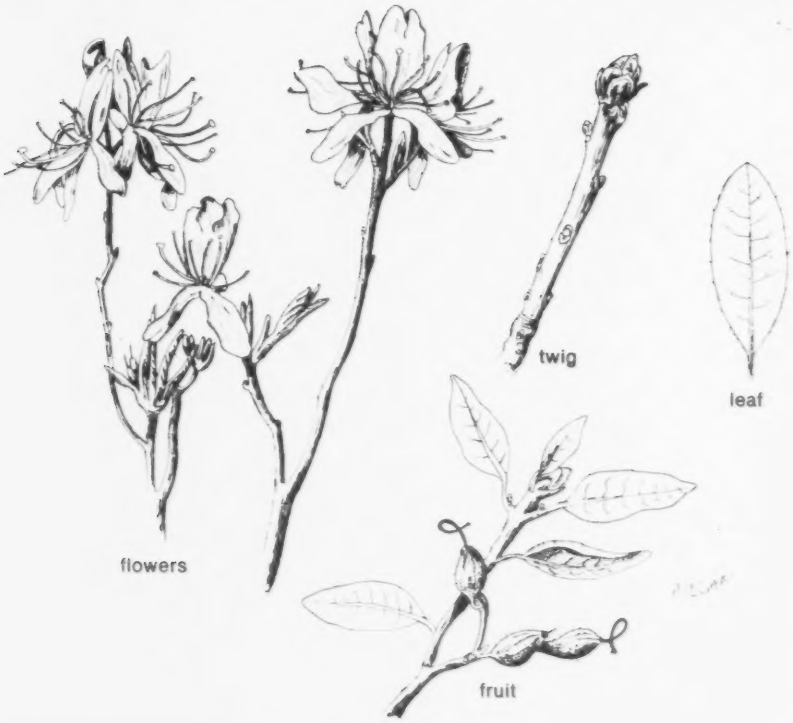
Leaves are alternate and often crowded near the ends of the branches so as to appear opposite. They are thin, oval-shaped with a pointed tip, dark green and shiny above, whitened, and slightly hairy beneath, 3.5 - 12 cm long. The margins are entire and may be slightly wavy. The main veins tend to follow the edge of the leaf to the tip.

Flowers are small, creamy-white, and borne in flat-topped terminal clusters (cymes) about 5 cm across. Each flower has 4 petals. Blooms in July.

Fruit are dark blue drupes with a bloom, about 6 mm in diameter and contain one stone. Ripen in August.

Found in rich woodlands, at the edge of coniferous woods, and the base of slopes. Restricted to west-central and western Newfoundland.

The fruit, though not considered edible by man, are eaten by a number of birds including the Ruffed Grouse.



RHODORA, *Rhododendron canadense* (L.) Torr.
Ericaceae

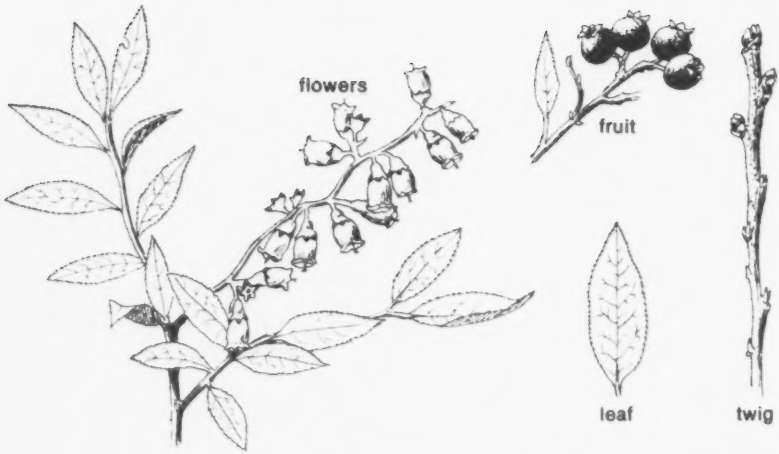
An ascending shrub, 0.6 - 1 m high. Twigs are yellowish-brown and hairless, or slightly fine-hairy. Older branches are brown and gray. Winter buds are purplish and downy. The terminal buds are large, containing preformed flowers; the leaf buds are small. The buds and leaves are clustered at the ends of the twigs.

Leaves are alternate, oblong to elliptical, acute or rounded at the tip, often tapering to the base, and 3 - 6 cm long. Both surfaces are hairy, the uppersurface grayish-green, and the undersurface slightly paler. The margins are revolute, entire, and hairy-fringed.

Flowers are purplish-rose, about 2 cm across, clustered at the twig ends, usually appearing when the leaves start to unfold. The corolla is two-lipped, the upper with 2 or 3 lobes and the lower deeply divided into 2 lobes. There are 10 stamens. Blooms in June.

Fruit are dry capsules with a purplish 'bloom', hairy, 1 - 1.5 cm long, 5-parted, and many-seeded. The seeds are dispersed during the fall and the opened dark brown capsules remain on the twigs throughout the winter.

Found on bogs, heathlands, rocky slopes, in wooded areas, and around ponds throughout most of Newfoundland, but rare on the Great Northern Peninsula. It is not found in Labrador.



LOW SWEET BLUEBERRY, *Vaccinium angustifolium* Ait.
Ericaceae

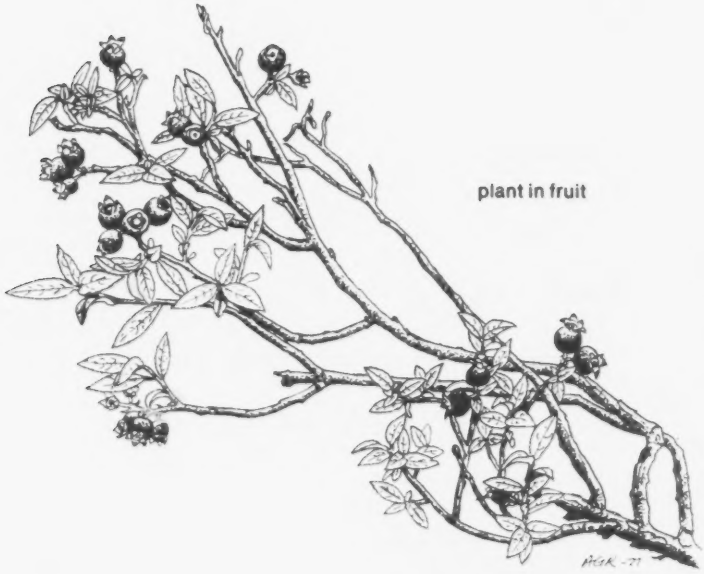
An intricately-branched shrub 5 - 25 cm high, forming clumps or extensive patches and spreading by underground stems. Twigs are warty with white dots and hairless except for new shoots which have lines of hairs following down from the buds. Young branchlets are green and the older stems are reddish. Buds are covered with smooth reddish- purple scales. Two types of buds are commonly present: smaller leaf buds and larger, swollen flower buds. Usually 2 - 4 flower buds are at the ends of the twigs. In winter, there is no distinct difference between the color of the older branches and the newer branches, as in the Huckleberries.

Leaves are narrow, elliptical, oblong, or lanceolate, pointed at both ends, 0.5 - 1.5 cm wide and 1 - 3.5 cm long. The margin is minutely toothed, each tooth being bristle-tipped. The uppersurface is usually bright green, shiny and hairless; the undersurface is paler and hairless or hairy, especially along the veins. In autumn the leaves turn scarlet or crimson.

Flowers are bell-like, 5-toothed, 5 - 10 mm long, white or pinkish-tinged and form compact clusters (racemes) at the tips of the branches. They appear with the leaves, blooming from late May to mid-July.

Fruit are globular blue berries, often with a bloom, 5 - 15 mm in diameter, very sweet and edible. One variety, *nigrum* (Wood) Dole, has a shiny black berry. Ripen by early August and stay until frost.

This is our commonnest Blueberry, found throughout the province on heathlands and bogs and in open woodlands. Large quantities of the berries are picked each year for export.



plant in fruit

NORTHERN DWARF BLUEBERRY, *Vaccinium boreale* Hall and Aalders

This species, which is similar to *V. angustifolium*, was first proposed by Hall and Aalders in 1961, mainly on the basis of the chromosome number which they found to be 24. *V. angustifolium* on the other hand has a chromosome number of 48. Vander Kloet (1977) has reported on some additional characteristics which indicate that "*V. boreale* should be recognized as a species." The following description is derived mainly from Vander Kloet's paper.

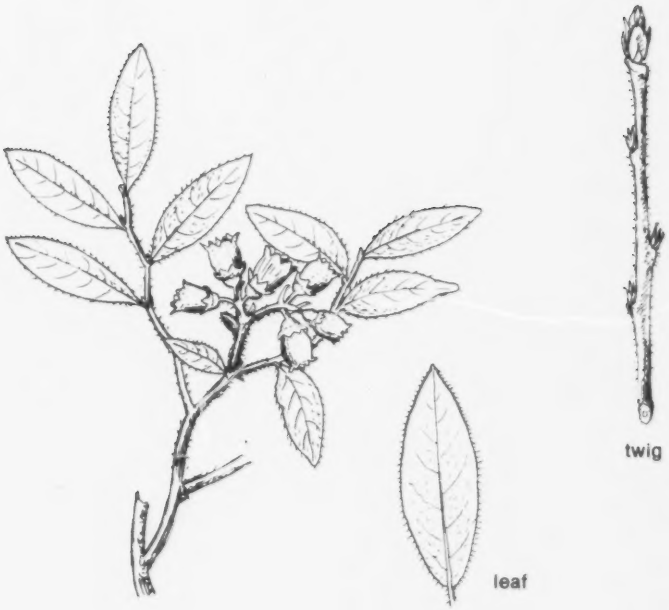
A much-branched, clumped shrub, 1 - 6 cm high with the rootstalks on the surface. Twigs are green, warty, and hairy along the grooves.

Leaves are narrowly elliptic, 2 - 6 mm wide and 0.8 - 2 cm long, bright green, hairless or rarely hairy along the midvein above, and sharply toothed.

Flowers are white to greenish-white, 3 - 4 mm long, and in clusters of 2 to 5 (racemes). It starts blooming about 2 weeks before *V. angustifolium* in the same area.

Fruit are blue berries with a bloom, 3 - 5 mm in diameter. They ripen before those of *V. angustifolium*.

Found throughout Newfoundland and Labrador in alpine meadows, open rocky areas, and exposed coastal headlands.



VELVET — LEAF BLUEBERRY, *Vaccinium myrtilloides* Michx.
Ericaceae

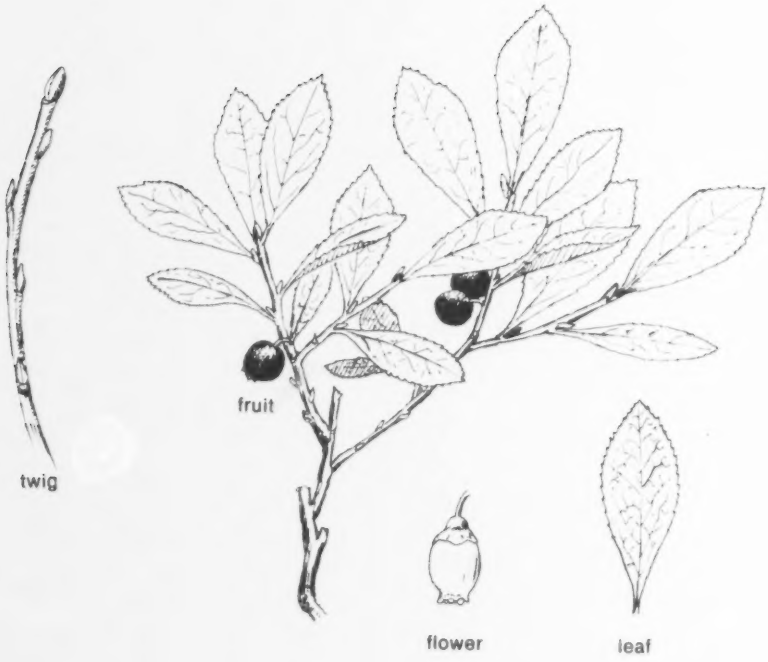
A dense shrub up to 40 cm high. Young twigs are green and densely velvety-hairy. Older branches are reddish-brown and warty. There are two types of buds: smaller leaf buds and larger flower buds.

Leaves are alternate, elliptical, thin, downy-hairy beneath, and sometimes above, 2 - 5 cm long, the margins entire and finely hairy.

Flowers are greenish-white or tinged with purple, bell-shaped, 4 - 6 mm long, and in crowded clusters at the ends of the branches, expanding when the leaves are half grown.

Fruit are blue berries with a heavy bloom, 7 - 10 mm in diameter, edible but sour. Ripen in August.

Found in moist woods, swamps, and clearings. At least four authors have reported this species from Newfoundland and Labrador. Camp (1945) reports it as occurring "east to Labrador." Fernald (1950) says that it is 'local' in Newfoundland. Rouleau (1956) includes it in his checklist for Newfoundland and Labrador. And, Rousseau (1974) says that it has been collected in the drainage basin of the Churchill River in central Labrador. Vander Kloet (1977), however, after a survey of herbarium specimens, has concluded that it is absent from Newfoundland and Labrador.



DWARF BILBERRY, *Vaccinium cespitosum* Michx.
Ericaceae

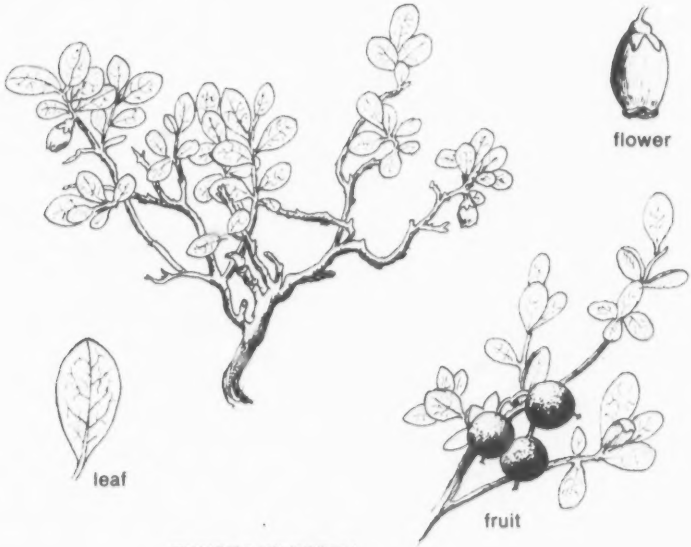
A much-branched, tufted shrub, 5 - 30 cm high. Twigs are green to brownish, minutely hairy or smooth and somewhat ridged. The buds have only 2 scales. The other Blueberries and Bilberries have 3 or more bud scales.

Leaves are alternate, thin, inversely ovate to spatula-shaped, pointed to rounded at the tip, and tapering to the base. They are bright green on both sides, hairless and shiny, fine-toothed, prominently net-veined, and 1.5 - 3 cm long.

Flowers are white to pinkish, 4 - 6 mm long, urn-shaped, nodding on short recurved stalks, and solitary in the leaf axils. Blooms in July.

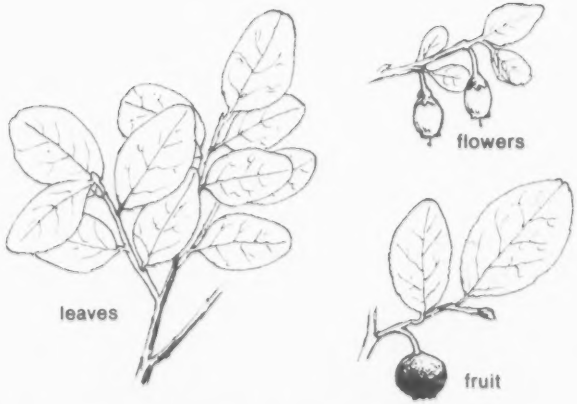
Fruit are light blue berries with a pale bloom, 6 - 8 mm in diameter, edible and sweet. Ripen in August.

Found in coniferous woods, along rocky shores and talus slopes. Recorded from western Newfoundland, the Great Northern Peninsula, and north to about 56 degrees latitude in Labrador.



TUNDRA BILBERRY

leaf of
Newfoundland
Bilberry



OVAL-LEAVED BILBERRY

TUNDRA BILBERRY, *Vaccinium uliginosum* L.
Ericaceae

A much-branched shrub, usually stiff and stoutish in appearance, 8 - 30 cm high. Twigs are smooth or finely hairy, shiny, and reddish-brown. Older branches are brownish with shreddy bark. Buds are blunt, of one type.

Leaves are alternate, 0.5 - 2 cm long, oval or elliptical, often broadest towards the rounded tip and wedge-shaped at the base. They are leathery and thick, mostly hairless, nearly sessile and have entire margins. The surfaces are dull green above, pale and prominently net-veined beneath.

Flowers are solitary or in clusters of 2 or 3 at the ends of the branches. The corolla is urn or bell-shaped, 4 (or rarely 5)-toothed, about 5 mm long, white or often tinged pink. There are 8 stamens. Blooms from mid-June to mid-July.

Fruit are blue or blackish berries, 2 - 6 mm in diameter, usually covered with a bloom, edible and sweet, but not abundant. Ripen in August.

Found on dry and wet heaths, coastal peatlands, open coniferous woods and exposed alpine habitats throughout Newfoundland and Labrador.

NEWFOUNDLAND BILBERRY, *Vaccinium nubigenum* Fern.
Ericaceae

An ascending clumped shrub up to 70 cm high. Twigs are pale brown, round, smooth or minutely hairy. Older branches are darker with peeling gray bark.

Leaves are alternate, elliptical, hairless and somewhat shiny, thin, fine-toothed, prominently net-veined beneath, and 1 - 3.5 cm long.

Flowers are pink, about 6 mm long, urn-shaped and solitary in the leaf axils. Blooms in July.

Fruit are blue-black berries with a bloom, 7 - 9 mm in diameter, edible and sweet-tasting. Ripen in August.

Found on rocky and peaty soils on the northern part of the Great Northern Peninsula.

OVAL-LEAVED BILBERRY, *Vaccinium ovalifolium* Sm.

Ericaceae

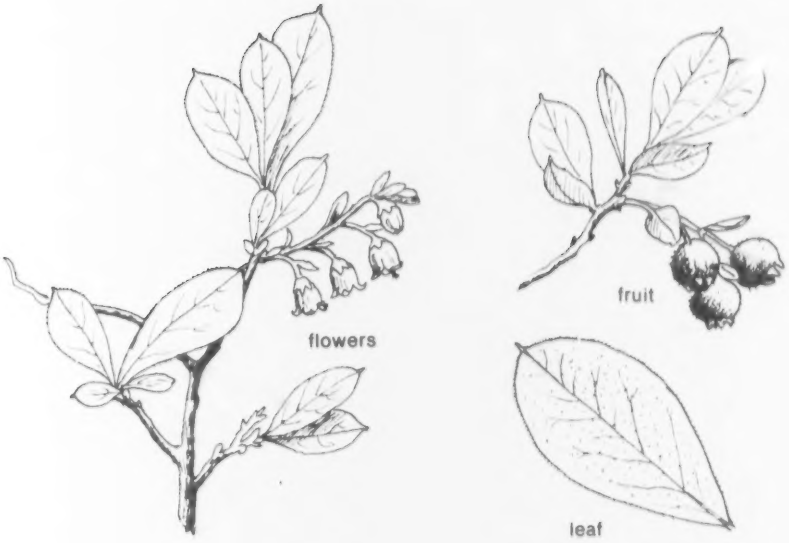
A slender straggling shrub up to 1 m high. Twigs are brown or yellowish, hairless, and 4-angled. Older branches are dark gray with peeling bark.

Leaves are alternate, elliptical or oval, rounded at the tip, bright green and shiny above, somewhat whitened beneath, hairless on both surfaces, entire or sometimes wavy-edged, and 1.5 - 4 cm long.

Flowers are pink or red, about 6 mm long, 5-parted, urn-shaped, and solitary in the leaf axils. Blooms in July.

Fruit are edible blue-black berries with a bloom, 6-9 mm in diameter. Ripen in August.

Found mostly in coniferous woods of western and west-central Newfoundland, the Great Northern Peninsula, and southeast Labrador.



DWARF HUCKLEBERRY, *Gaylussacia dumosa* (Andr.) T. & G.
Ericaceae

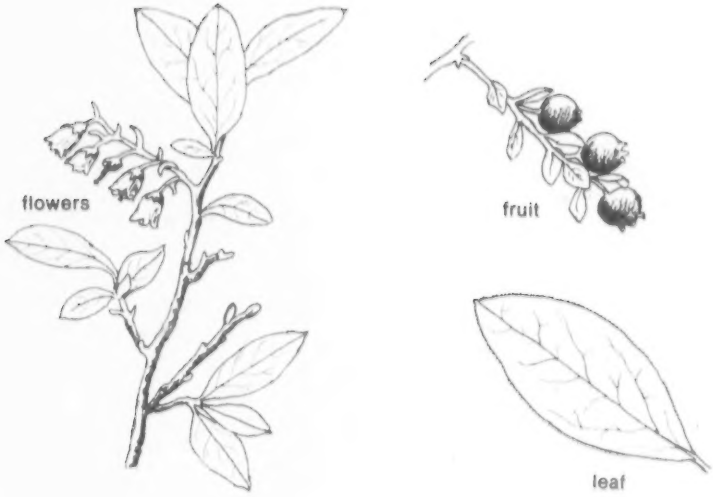
A slender, scraggly-looking shrub, 15 - 20 cm high, arising from creeping underground stems. Twigs are red and downy with white hairs, contrasting with the older branches which are brown or gray and smooth. Winter buds are shiny and red, the 4 - 5 scales fringed with hairs.

Leaves are alternate, oblong, wedge-shaped at the base and broadest near the tip, leathery, and about 4 cm long. The margins are entire and hairy-fringed. The tip is rounded and has a conspicuous awn-like point. Both surfaces are shiny and sprinkled with resinous dots, the uppersurface dark green and the undersurface paler green. In autumn the leaves turn scarlet.

Flowers are in loose clusters (racemes) at the ends of the branches. They are bell-shaped, white or pink, sometimes tinged with red, and are 5-toothed. There are 10 stamens. Blooms from mid-July to late August.

Fruit are black and shiny drupes with a few glandular hairs, 6 - 7 mm in diameter, edible but rather tasteless and contain 10 nutlets. Ripen by late August or into September.

Found on bogs and fens, wet and dry heaths, and other damp habitats, mostly in coastal areas. It has been recorded throughout Newfoundland, except on the Great Northern Peninsula.



BLACK HUCKLEBERRY, *Gaylussacia baccata* (Wang.) K. Koch
Ericaceae

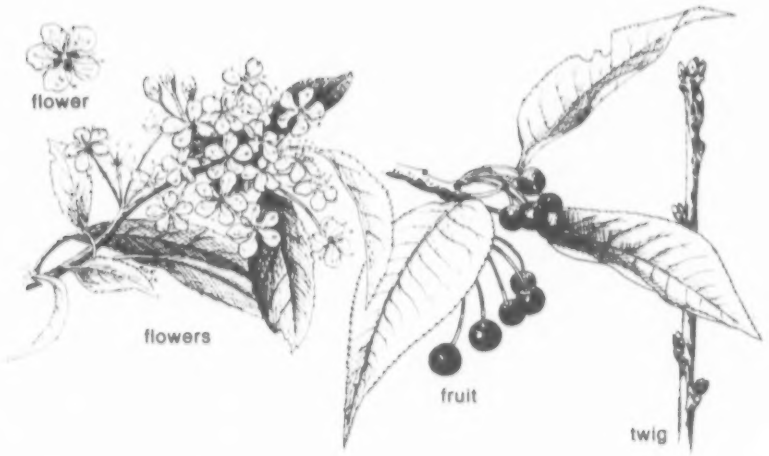
A low, much-branched shrub, 30 - 60 cm high. Young twigs are hairy and the older bark is gray or dark brown and flaking. Winter buds are red and have 2 or 3 scales. The new growth is thickly covered with shiny resinous globules, making the plant sticky.

Leaves are alternate, oval, elliptical or ovate, about 4 cm long, smooth except for hairs on the main veins. The margins are entire and hairy. The tip is often pointed and may have a minute sharp tip, not awn-shaped as in Dwarf Huckleberry. Both surfaces are light green, though the undersurface is often yellowish. Resinous sticky glands cover both surfaces of the leaf.

Flowers are deep pink or reddish-yellow bells subtended by reddish bracts and borne as one-sided clusters (racemes) towards the ends of the branches. The corolla is 5-toothed. There are 10 stamens. Blooms from mid-July to August.

Fruit are shiny and black drupes, 6 - 7 mm in diameter, edible and sweet tasting, and contain 10 nutlets. Ripen in August or September.

Found in dry and moist woods, thickets, and on dry rocky barrens and wet heaths. It is somewhat coastal in distribution but does not range as far north in Newfoundland as the Dwarf Huckleberry. It has been recorded from the West Coast south of the Bay of Islands, the South Coast, and the Avalon Peninsula.



PIN CHERRY, *Prunus pensylvanica* L.f.
Rosaceae

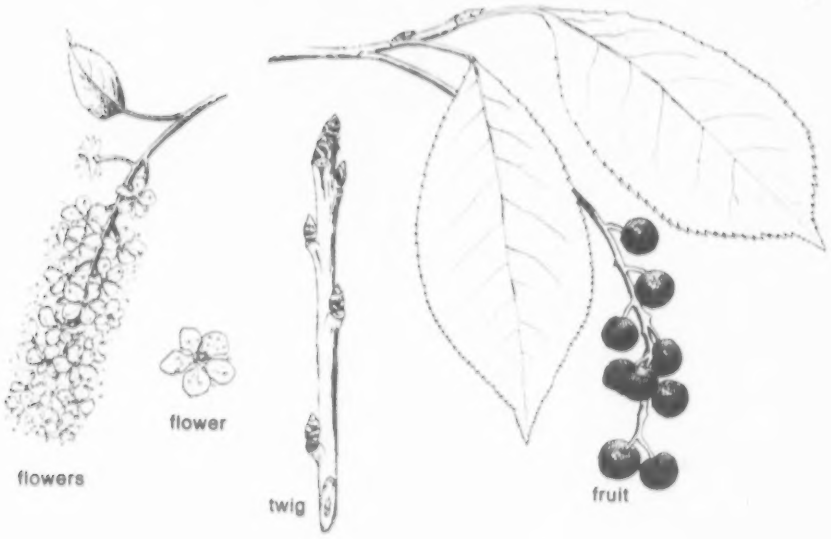
A small tree, usually less than 8 m high, with a fairly straight and short trunk, and a narrow, rounded or flat-topped crown. Twigs are slender, smooth, reddish-brown, and have a peeling grayish film. Buds are alternate, rounded or somewhat sharp-pointed, 2 - 3 mm long, and reddish-brown, clustered at the end of the twig and often in clusters of 2 or 3 along the twig. There are three bundle scars. Bark is bronze to dark brown, tending to gray on older parts, marked with many horizontal, pinkish lenticels.

Leaves are alternate, lanceolate, broadest near or below the middle, rounded or wedge-shaped at the base, and gradually tapering to a slender sharp tip. They are 3 - 9 cm long, thin, hairless on both surfaces, shiny yellowish-green above, somewhat paler beneath, and slightly folded along the midrib. The margin is finely toothed with incurved teeth. The leaves commonly curve downwards from the twigs, especially in autumn when they take on a drooping appearance. The leafstalk has a pair of glands near the base of the leaf.

Flowers are white, in closely-packed roundish clusters (umbels or corymbs), 4 - 6 cm across. There are 5 - 7 flowers in a cluster. Each flower is 1 - 1.5 cm across, and has 5 petals and 20 or more stamens. Blooms from early June to early July.

Fruit are bright red drupes about 6 mm in diameter, containing a single seed, arranged in small clusters with the slender stems arising from one point. They are edible but somewhat sour. Ripen from mid to late August.

Found in clearings, cut-overs, burned areas, along shores and the edges of coniferous woods, often forming thickets. Occurs throughout Newfoundland and southern Labrador.



CHOKE CHERRY, *Prunus virginiana* L.
Rosaceae

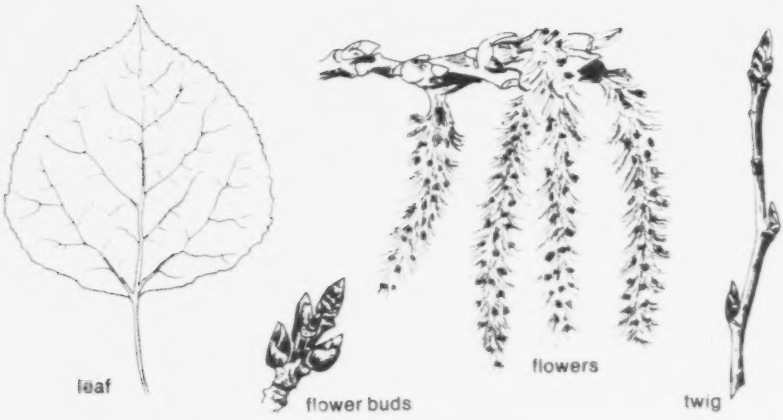
A large shrub or small tree, 2.5 - 5 m high, often with crooked, erect branches and an irregular crown. Twigs are grayish to reddish-brown, with scattered, light-colored lenticels, but do not have a peeling film. Buds are alternate, spindle-shaped, sharp-pointed, 4 - 7 mm long, and spreading from the twig. Bud scales are rounded or notched at the tip, dark brown at the base and light tan at the margins. There are three bundle scars. Bark is gray, tending to reddish on older parts.

Leaves are alternate, inversely ovate to broadly oval, usually widest above the middle, with a rounded or broadly wedge-shaped base and abruptly pointed at the tip. They are 3 - 4 cm long, thin, hairless on both surfaces, shiny dark green above and paler beneath. The margin is sharply toothed, each tooth ending in a straight hair-like point. The leafstalk has one or more pair of glands near the leaf base.

Flowers are white, in erect or spreading cylindrical clusters (racemes), 6 - 11 cm long. Each flower has 5 petals, 20 stamens, and is about 1 cm across, and each cluster has 20 - 45 flowers. Blooms from mid-June to mid-July.

Fruit are dark red or dark purplish drupes, 6 - 10 mm in diameter, containing a single seed, and borne in drooping clusters. They are edible but astringent. Ripen by late August.

Found along stream banks, roadsides, and the edges of forests throughout most of Newfoundland. It is not found on the Great Northern Peninsula or in Labrador. Prefers rich, moist soils, but may occur in drier habitats.



TREMBLING ASPEN, *Populus tremuloides* Michx.
Salicaceae

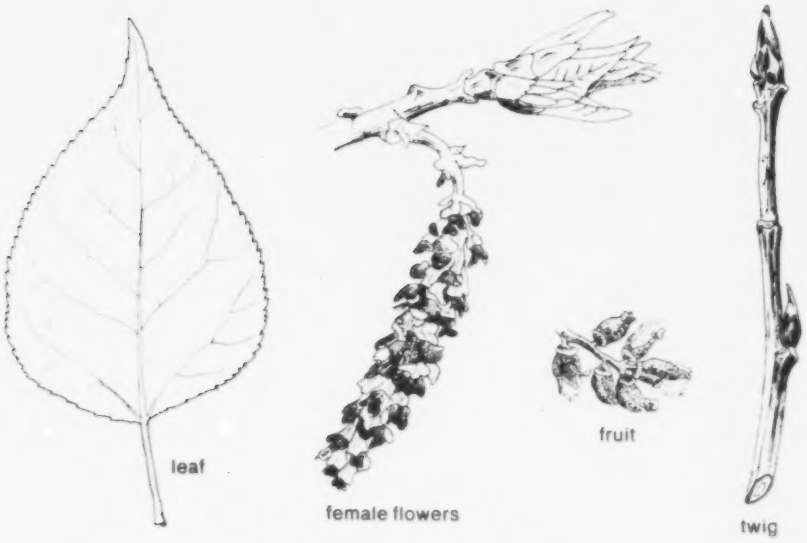
A slender deciduous tree with a long cylindrical trunk and a rounded crown of ascending branches, usually 15 - 20 m high, but attaining heights of 25 m. Twigs are slender, slightly angled, shiny, reddish to grayish-brown and hairless, with scattered orange lenticels. Buds are alternate, very shiny, 5 - 7 mm long, hairless, dark reddish-brown and are not gummy. The tips of the lateral buds curve in towards the twig. Bud scales are mostly notched at the tips. Leaf scars are crescent-shaped and have three bundle scars. Both the Trembling Aspen and the Balsam Poplar have the lowest bud scale placed directly above the leaf scar. Bark is olive or pale green and smooth, becoming gray on older trunks.

Leaves are alternate, broadly ovate to nearly circular in outline, abruptly pointed, rounded at the base, finely toothed, and 2 - 7 cm in length and width. Both surfaces are hairless, dark green above, paler beneath, turning yellow in the fall. The leafstalk is long and slender and flattened at right angles to the plane of the leaf, thus making the leaf tremble in the slightest breeze.

Flowers are small, in drooping hairy catkins, 4 - 6 cm long, the male and female on different trees. Male flowers have 6 - 12 stamens with red anthers. Female flowers have two red stigmas. Blooms from early May to early June before the leaves unfurl.

Fruit are tiny, cone-shaped, 2-valved, hairless capsules about 6 mm long, arranged in elongated clusters. Seeds are small and have long white hairs. Mature by the time the leaves are fully grown (mid-July).

Found throughout Newfoundland and southern Labrador. It is most common in the north-central part of insular Newfoundland. Occurs on a variety of soils but prefers well-drained, moist loams.



BALSAM POPLAR, *Populus balsamifera* L.
Salicaceae

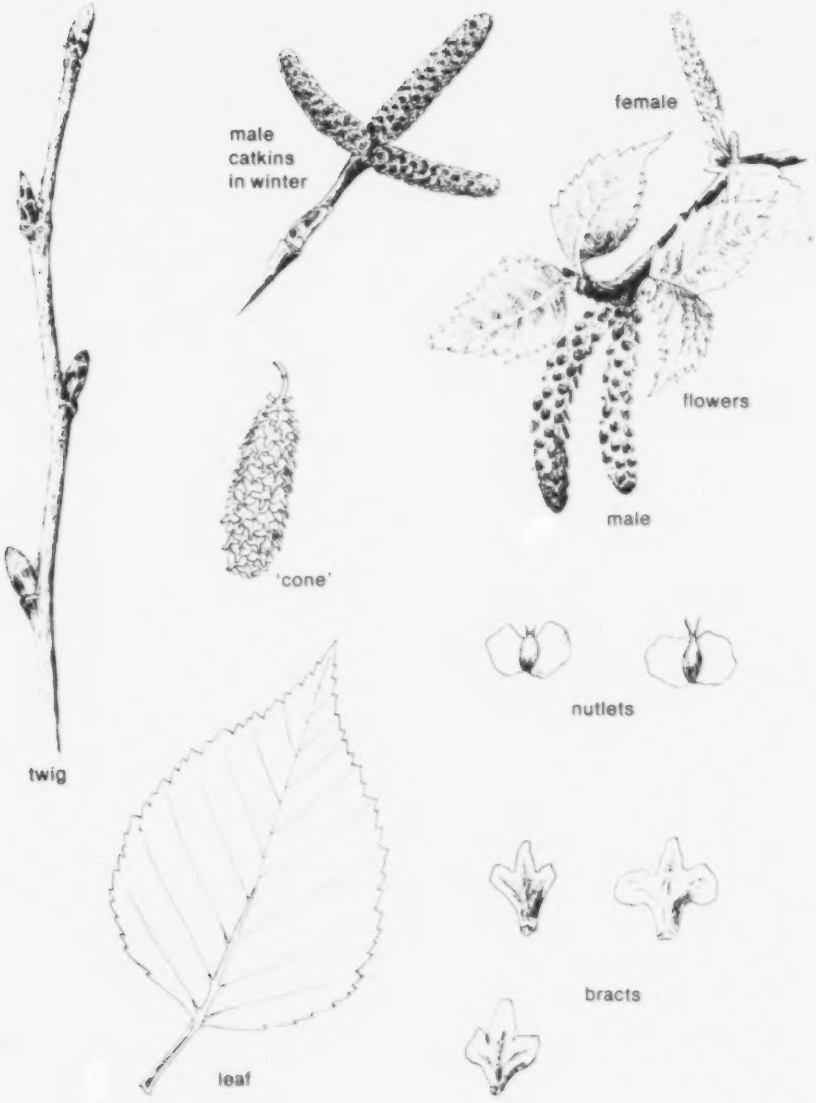
A medium-sized deciduous tree ranging up to 25 m high, with a fairly straight cylindrical trunk and an irregular open crown. Twigs are stout, slightly angled, shiny, reddish-brown, and hairless, with a few scattered light-colored lenticels, and a strong balsamic odor. There are several prominent ridges running down the twig. Buds are alternate, somewhat shiny, 1 - 1.5 cm long, hairless, dark reddish-brown, and gummy. The tips of the lateral buds incurve slightly towards the twig. Bud scales are mostly sharp-pointed. Leaf scars are broadly crescent-shaped and have three bundle scars. Bark is grayish-brown and deeply furrowed on older trunks.

Leaves are alternate, ovate, gradually tapering to a sharp tip, rounded to heart-shaped at the base, finely toothed, and 8 - 12 cm long. Both surfaces are hairless, being shiny dark green above, and paler with rusty blotches beneath. The leafstalk is round in cross-section.

Flowers are small, in long-stalked, drooping catkins, 7 - 9 cm long, the male and female on different trees. Male flowers have 12 - 30 stamens with red anthers. Female flowers are green with two red stigmas. Blooms from mid-May to early June before the leaves unfurl.

Fruit are small, ovate, 2-valved hairless capsules, 6 - 8 mm long, arranged in elongated clusters. Seeds are light brown and hairy. Mature by mid-July.

Found mostly on moist, rich bottomlands throughout Newfoundland, being most common in the western part of the island; uncommon in southern and central Labrador.


male
catkins
in winter
female
flowers
male
'cone'
twig
nutlets
bracts
leaf

WHITE BIRCH, *Betula papyrifera* Marsh.
Corylaceae

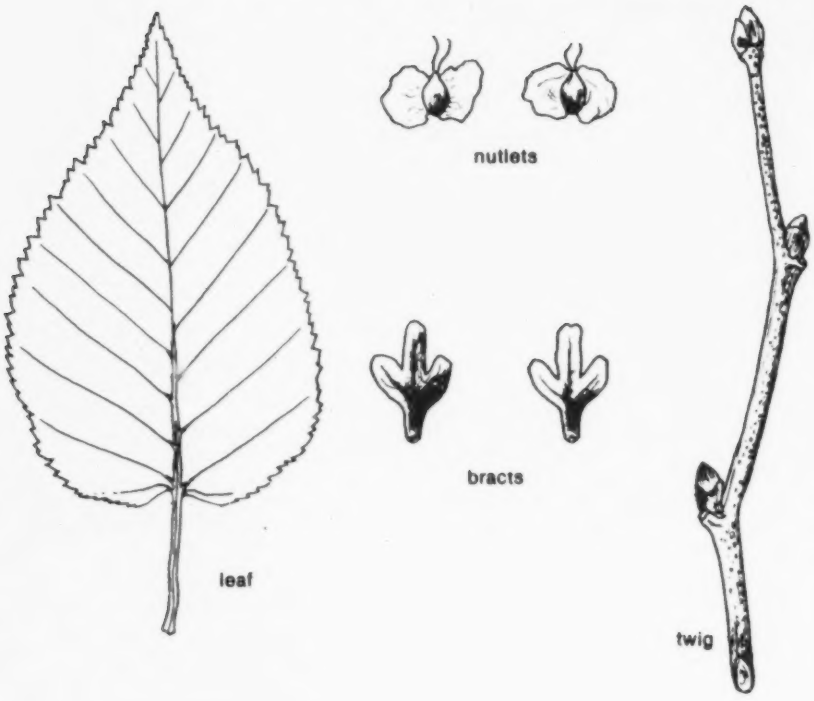
A deciduous tree ranging up to 20 m high and quite variable in form. Those growing in open areas have a short trunk and an open pyramidal crown whereas those growing in the forest have a slender curving trunk and a narrow, oval, open crown. Young trees and those growing in exposed habitats are shrub-like with many branches arising from near the ground. The young shoots are usually densely covered with hairs. Twigs are slender, slightly angled, dark reddish-brown and dotted with white lenticels, hairless or somewhat hairy and unlike the Yellow Birch do not have a wintergreen taste. Buds are spindle-shaped, blunt or slightly sharp-pointed and 6 - 8 mm long. Bud scales usually have slightly hairy margins. In winter the male catkins are ascending or spreading, 2 - 3 cm long, and usually in clusters of 3 at the twig ends. Young bark is reddish-brown with transverse whitish lenticles. Mature bark is chalky white or cream-colored and peels easily into horizontal strips.

Leaves are alternate, ovate, tapering to the tip, wedge-shaped or broadly rounded to truncate, but rarely heart-shaped, at the base, coarsely and irregularly toothed, and 3 - 8 cm long. They are dark green and hairless above, paler with hairs in the axils of the larger veins and near the base beneath. Each leaf has about 7 pair of veins and an average of 23 (range 16-31) teeth to a side.

Flowers are catkins with the sexes separate but on the same tree. Male flowers are drooping, 3 - 9 cm long, dark reddish-brown at first, appearing yellow at flowering time. Female flowers are erect, about 1.5 cm long, green with protruding red stigmas. Blooms from mid-May to late June.

Fruit are 2-winged flat nutlets about 2 mm long, borne in pendant oblong-cylindrical 'cones', 2-4 cm long. The thin wing is much wider than the nutlet. The styles are short and stubby (about 0.9 mm long). The median lobe of the bract is short and tapering to the tip. The lateral lobes are reflexed, upturned, or spread horizontally.

Found in various habitats including mixed forests, open woods, cut-over areas, hillsides, and exposed coastal areas. It grows best on well-drained moist soils. Occurs throughout Newfoundland and north to about 57 degrees latitude in Labrador. It is more plentiful in central and western parts of the island and is our most common hardwood species.



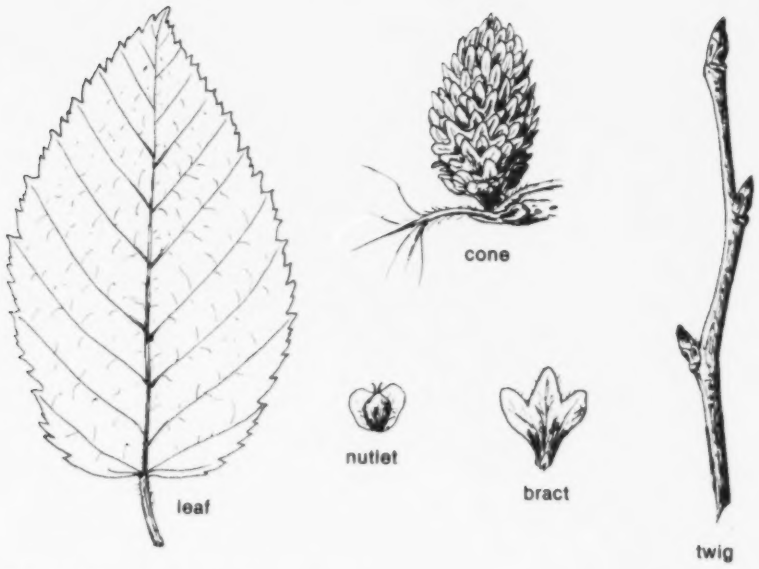
MOUNTAIN WHITE BIRCH, *Betula cordifolia* Regel

Recent studies have suggested that the Mountain White Birch is a separate species (Brittain and Grant, 1967). Fernald (1950) lists it as a variety of *B. papyrifera*, largely on the basis of the heart-shaped leaves. A number of other characteristics can be used, however, for separating the two species. The two species sometimes hybridize making it somewhat difficult to identify all specimens with certainty.

The young shoots are hairless or essentially so and are covered with a glandular exudate that dries out at the end of the season leaving white dots on the twig. The mature bark is light yellow-brown or tinged reddish-brown. The leaves are almost consistently heart-shaped at the base with the surfaces as in White Birch. Each leaf has about 9 pair of veins and an average of 47 (range: 28-67) teeth to a side.

The bracts have a consistent form. The median lobe has nearly parallel sides and a blunt tip. The lateral lobes are ascending with smoothly curving outer margins. The nutlet has long styles (about 2 mm long) that sometimes exceed it in length. The 'cones' are generally plumper and larger than those of White Birch, up to 6 cm long.

Occurs throughout the range of the White Birch in Newfoundland and Labrador.



YELLOW BIRCH, *Betula lutea* Michx. f.
Corylaceae

A deciduous tree ranging up to 20 m high, of irregular form with spreading branches and a short crown. Twigs are slender, slightly angled, tan-colored or light brown, hairless or slightly hairy, and have a distinctive wintergreen smell and taste when broken. Buds are spindle-shaped, sharp-pointed, and about 5 mm long. Bud scales are hairy-margined. In winter the male catkins are about 1 cm long and occur in clusters of 4 or 5 at the ends of the twigs. Young bark is dark reddish becoming yellowish and peeling into thin, papery curls that give the trunk a ragged appearance. Older bark is darker and broken into plate-like scales.

Leaves are alternate, oval to oblong — ovate, gradually tapering from about the middle to the tip, and gradually narrowing to the rounded, heart-shaped, or truncate base. They are dark green and essentially hairless above, paler and usually hairy along the veins beneath, and 6 - 10 cm long. Both surfaces are hairy when the leaves are unfolding. The margins are coarsely and irregularly toothed. Each leaf has 9 or usually more pair of veins.

Flowers are catkins having male and female catkins on the same tree. Male flowers are drooping, 3 - 5 cm long, and yellowish. Female flowers are erect, about 1.5 cm long, and green with red stigmas. Blooms from mid-May to mid-June.

Fruit are 2 - winged flat nutlets, borne in erect, plump, oval-cylindrical 'cones' that are 2 - 4 cm long. The wing is narrower than the nutlet. The bracts have 3 ascending lobes and are more or less hairy.

Found mostly in rich, moist woodlands. It is not common in Newfoundland occurring south of Deer Lake on the West Coast, in the Bay d'Espoir area on the South Coast, and in sheltered parts of the Avalon Peninsula.

flowers
twig
fruit
flower

AMERICAN MOUNTAIN-ASH, DOGBERRY, *Sorbus americana* Marsh.
Rosaceae

A small tree usually 3 - 6 m high with a short trunk and ascending or spreading branches, forming an open, round-topped crown. It is often shrub-like with many branches arising from near the ground. Twigs are stout, smooth and hairless, reddish-brown to grayish, with a scaling whitish film and rather large, elongate white lenticels. Buds are conical, shiny dark red or wine-colored, most hairless or with a few scattered hairs, and gummy. Terminal bud is about 1.5 cm long and often curved at the tip. Lateral buds are smaller and appressed to the twig. Leaf-scars are narrow and crescent-shaped, raised on a prominent swelling that is darker than the twig. There are 5 bundle scars. Bark is bronze to purplish on newer branches, grayish-green to light gray with many large, horizontal, warty lenticels on the older trunks.

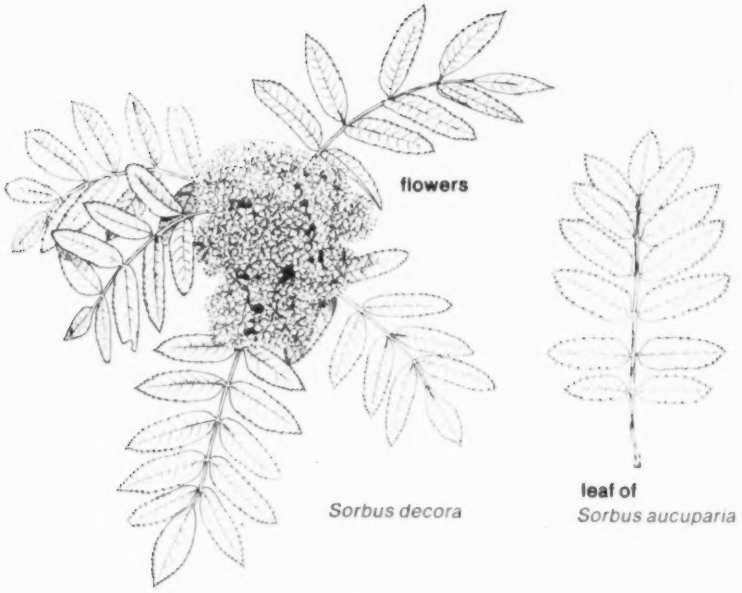
Leaves are alternate and pinnately compound with 11 - 17 leaflets. Leaflets are lanceolate to narrowly oblong-lanceolate, gradually tapering to the tip, and 4 - 5 times as long as wide. They are bright shiny green and hairless above, paler and hairless beneath, and 5 - 8 cm long. The margin is sharply and finely toothed nearly to the base. The terminal leaflet is usually oval-shaped.

Flowers are creamy-white, in dense, flat-topped terminal clusters (cymes), 6 - 15 cm across. Each flower has 5 petals and is 5 - 8 mm in diameter. There are 15 - 20 stamens that are shorter than the petals. The flower stalks are usually hairless but may be sparsely hairy. Blooms from late June through July.

Fruit are berry-like pomes, glossy, bright orange-red to scarlet, 5 - 9 mm in diameter, edible but acidic, and borne in round-topped clusters. Seeds are 3 - 3.5 mm long by 2 mm wide. Ripen in September and may persist through the winter.

Found throughout Newfoundland in open woods, rocky hillsides, forested areas, moist thickets, and other habitats. Gardner (1973) gives four records of its occurrence in southern Labrador. It appears to be more common in Newfoundland than the Showy Mountain-ash.

The introduced European Mountain-ash, *Sorbus aucuparia* L., is commonly found around some settlements. Its buds are usually densely covered with white hairs. The leaves are oblong and sharp-pointed, dull green above, pale and usually permanently covered with white hairs beneath. The flower stalks are densely hairy. The fruit are 8 - 12 mm in diameter, red and covered with a 'bloom'.



SHOWY MOUNTAIN-ASH, DOGBERRY, *Sorbus decora* (Sarg.) Schneid.
Rosaceae

Similar in habit to *S. americana*. Twigs and buds are essentially the same as those of *S. americana*.

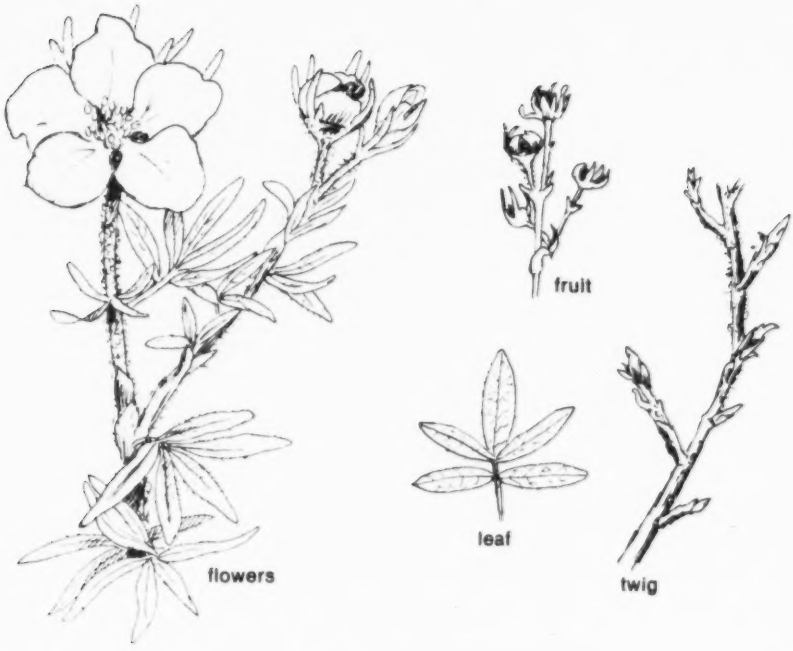
Leaves are alternate and pinnately compound with 11 - 17 leaflets. Leaflets are elliptical, oval or oblong, abruptly tapering to a sharp point, and 2 - 3 times as long as wide. They are dull dark green and usually hairless above, whitish and sparsely hairy or hairless beneath, and 4 - 8 cm long. The margin is coarsely and sharply toothed along the upper two-thirds to three-quarters of its length. The terminal leaflet is usually obovate in shape.

Flowers are similar to those of *S. americana* but are larger and start blooming earlier. The flat-topped flower clusters are 8 - 15 cm across. Individual flowers are 8 - 10 mm in diameter. Stamens are the same length as the petals. The flower stalks are hairy to sparsely hairy. Blooms from mid-June to July.

Fruit are berry-like pomes, bright orange-red to scarlet, and 6 - 10 mm in diameter. Seeds are 4 - 4.5 mm long by 1.5 - 2 mm wide. Ripen in September.

Found in a variety of habitats throughout Newfoundland and most of Labrador.

A variety of Showy Mountain-ash, *Sorbus decora* var. *groenlandica* (Schneid.) Jones, occurs in exposed habitats of Newfoundland and Labrador. Its leaflets have a prolonged tip and are pale green beneath. The flowers are 5 - 8 mm across and the fruit are 5 - 7 mm in diameter.



SHRUBBY CINQUEFOIL, *Potentilla fruticosa* L.
Rosaceae

An erect, dense and scrubby-looking shrub, 0.2 - 1.3 m high. Older bark is reddish-brown and shreddy. New branches are light reddish-brown and densely hairy. Buds are about 6 mm long and brownish, covered by persistent raised leaf scars and stipules. Bud scales are papery and dry, the outer scales barely covering the inner pre-formed leaves.

Leaves are alternate and crowded on the stem. They are pinnately compound with 5 - 7 leaflets that are 1.3 - 2.5 cm long, narrowly oblong to lance olate and sharp-pointed. The margin is entire and revolute. Both surfaces have white silky hairs, the undersurface whitened and densely hairy.

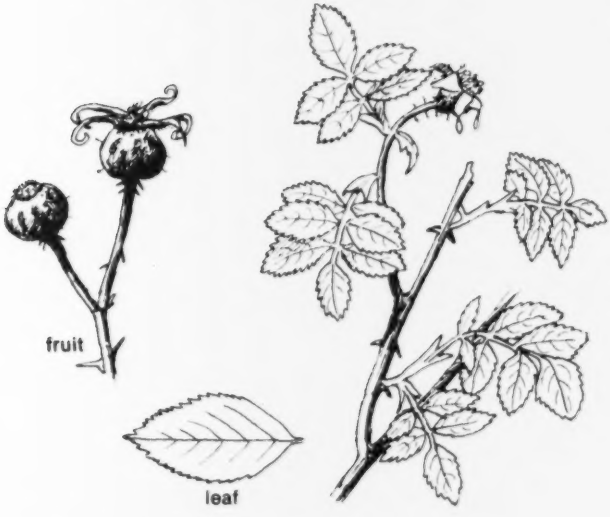
Flowers are solitary or in few-flowered clusters, each bright yellow, 1 - 2.5 cm across, with 5 rounded petals and 15 - 20 stamens. Blooms from early July to mid-September.

Fruit consists of many small seeds clustered to form dense heads about 6 mm across, enclosed by persistent calyx lobes. They remain throughout the winter.

Usually found in wet places — fens, shores of ponds and brooks, edge of woods, wet heaths, and roadsides. Less common on dry rocky barrens and limestone talus. Found throughout Newfoundland and southern and central Labrador.

Fernald, Kinsey and Rollins (1958) say that the leaves can be used as a substitute for tea.

NORTHEASTERN ROSE



VIRGINIA ROSE

NORTHEASTERN ROSE, *Rosa nitida* Willd.
Rosaceae

A bushy, erect or ascending shrub, usually less than 1 m high. New stems (canes) are densely covered with dark red bristles and scattered prickles. Older canes often have fewer bristles. Winter buds are small and reddish.

Leaves are alternate and pinnately compound being divided into 7 - 9 leaflets. Each leaflet is elliptical or oblong, pointed at both ends, 1.3 - 4 cm long, and finely and sharply-toothed almost to the base. Both surfaces are smooth, the uppersurface being shiny and green, the undersurface paler and sometimes with a few hairs on the midvein. In autumn the leaves turn orange or red.

Flowers are deep pink and fragrant, 4 - 6 cm across, 5-petaled, and have numerous yellow anthers. They are solitary or in a few-flowered clusters (corymbs). The calyx and flower stalks have many gland-tipped bristles. Blooms in July.

Fruit are bristly, scarlet "hips" consisting of a fleshy receptacle that surrounds numerous hard dry achenes. They ripen by late September.

This is the most common rose found in Newfoundland being found on fens, along streams and brooks, in wet thickets, and other damp habitats. There are no records for the Great Northern Peninsula and it is not found in Labrador.

VIRGINIA ROSE, *Rosa virginiana* Mill.
Rosaceae

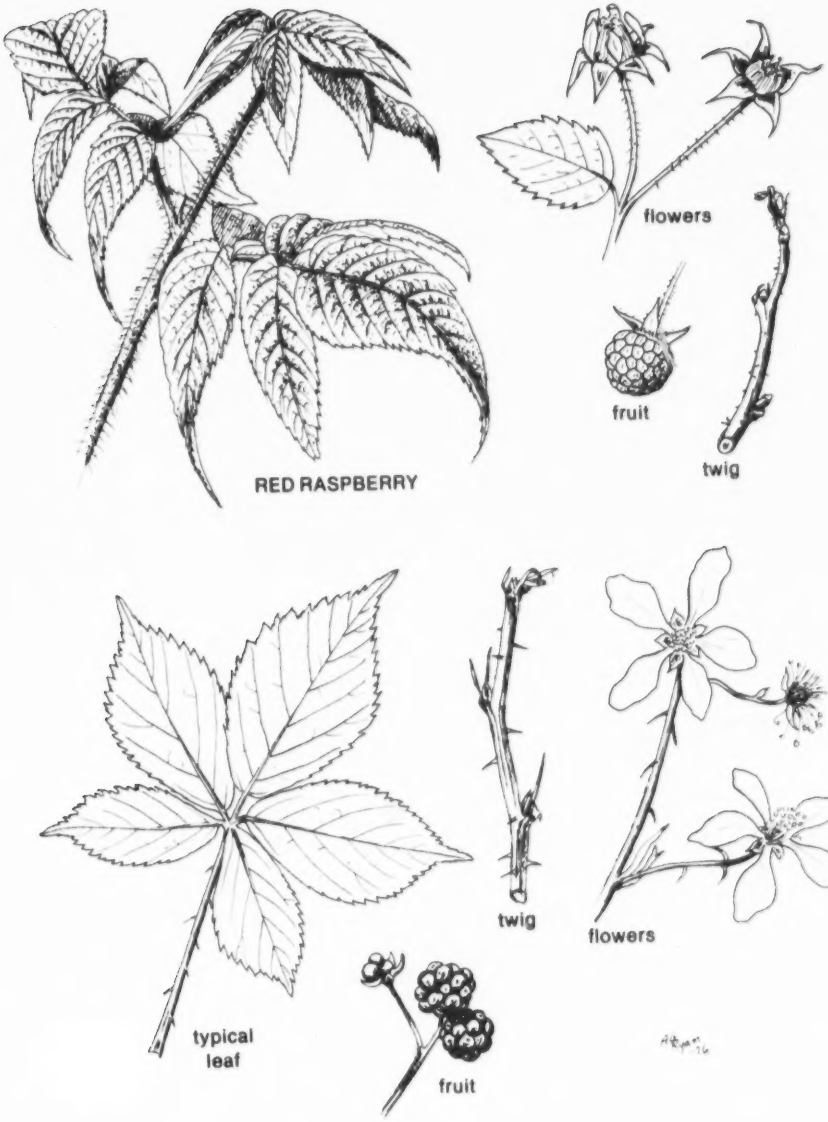
An erect shrub usually 1 - 2 m high. New stems usually have scattered, often paired, strong, stout and straight or recurved prickles. Older canes may have scattered prickles.

Leaves are alternate, pinnately compound, having 5 - 11 leaflets. Each leaflet is elliptical or oval, gradually rounded at the base, 2.5 - 6 cm long and coarsely sharp-toothed on the upper three-fourths of the margin. Both surfaces are smooth, the uppersurface being shiny and dark green, the undersurface lighter and often with a few hairs on the midvein.

Flowers resemble those of *R. nitida*. They occur singly or mostly in few-flowered clusters. The calyx and flower stalk may have scattered gland-tipped hairs. Blooms in July and August.

Fruit are like those of *R. nitida* though they are not usually as bristly. The Virginia Rose seems to fruit more heavily than the Northeastern Rose.

This species is found in wet and dry habitats. It is more common in wet thickets, clearings, swamps, and along shores. The distribution is similar to that of the Northeastern Rose.


RED RASPBERRY
flowers
fruit
twig
typical
leaf
twig
flowers
fruit

RED RASPBERRY, *Rubus idaeus* L.
Rosaceae

An upright arching shrub, 0.5 - 1.5 m high with round stems (canes). New branches are reddish and covered with glandular bristles. Older branches are brown and covered with prickles and bristles.

Leaves are alternate and pinnately compound with 3 - 7 oval, ovate or lanceolate leaflets. Leaflets are coarsely and sharply toothed, dark green and hairless above, pale green or whitened and densely hairy beneath, and 2 - 10 cm long. The veins are depressed above, giving the leaflets a wrinkled appearance. The upper leaves usually have only 3 leaflets.

Flowers are white or greenish-white, 1.5 cm across, with 5 petals and numerous stamens and pistils. The bristly sepals are usually bent backwards. The flowers occur in clusters of 2 - 5 in the upper leaf axils. Blooms from June to July.

Fruit are aggregates of many red drupelets, 1.3 - 1.9 cm in diameter, and when ripe fall away intact from the receptacle. Ripen by late July or early August.

Found in dry and moist woods, fields and thickets, along roadsides and in other disturbed areas throughout Newfoundland and southern Labrador.

BLACKBERRIES, *Rubus spp.*
Rosaceae

Blackberries are a very complex and confusing group. The species are difficult to identify due to many intermediate characteristics resulting from hybridization. Because of this no attempt will be made here to separate them into species, but rather some distinguishing characteristics of the group will be given.

Blackberries are erect, arching, or trailing shrubs. Stems are angular and armed with stout prickles.

Leaves are alternate and palmately compound with 3 - 7 leaflets (usually 5). Leaflets are 8 - 13 cm long, oval, elliptical, or ovate, usually gradually tapering to a point, and unequally toothed or sharply double-toothed. Both surfaces are hairless or hairy only along the veins beneath. The undersurface is soft-hairy in one of our species, namely *R. pensilvanicus.*

Flowers are white, 2- 4 cm across, the petals large and spreading. The calyx is usually hairless outside and woolly inside. They have many stamens and pistils. Blooms in July.

Fruit are similar to those of the Rapsberry but are black. The drupelets are not as compact and do not separate from the receptacle. Ripen in September.

Found in dry and moist thickets, clearings, and along roadsides.

Seven species have been recorded from Newfoundland: *R. Canadensis* L., *R. elegantulus* Blanch., *R. kennedyanus* Fern., *R. pensilvanicus* Poir., *R. recurvicaulis* Blanch., *R. ulterior* Bailey, and *R. vermontanus* Blanch. The most common species appears to be *R. canadensis.*

APPENDIXES

APPENDIX A

Plant Relationships

The following list indicates the family relationships of the genera and species of woody plants native to Newfoundland and Labrador. The classification follows that used by Fernald in *Gray's Manual of Botany*. The genera and species are arranged alphabetically within the family. The abbreviation (Labr.) indicates that the species has been found in Labrador, not in insular Newfoundland.

TAXACEAE — YEW FAMILY

Taxus canadensis Marsh.	Canadian Yew

PINACEAE — PINE FAMILY

Abies balsamea (L.) Mill.	Balsam Fir
Juniperus communis L.	Common Juniper
J. horizontalis Moench	Trailing Juniper
Larix laricina (DuRoi) K. Koch	Larch, Tamarack
Picea glauca (Moench) Voss	White Spruce
P. mariana (Mill.) B.S.P.	Black Spruce
Pinus resinosa Ait.	Red Pine
P. strobus L.	White Pine

SALICACEAE — WILLOW FAMILY

Populus balsamifera L.	Balsam Poplar
P. tremuloides Michx.	Trembling Aspen
Salix amoena Fern.	Charming Newfoundland Willow
S. ancorifera Fern.	Anchored Newfoundland Willow
S. arctica Pallas	Arctic Dwarf Willow
S. arctophila Cockerell	Tundra Dwarf Willow
S. argyrocarpa Anderss.	Silverleaf Willow (Labr.)
S. bebbiana Sarg.	Bebb's Willow
S. calcicola Fern. & Wieg.	Limestone Willow
S. candida Flugge	Hoary Willow
S. cordata Michx.	Heartleaf Willow
S. cordifolia Pursh	Ungava Willow
S. cryptodonta Fern.	Woolly Willow
S. discolor Muhl.	Pussy Willow
S. glaucophylloides Fern.	Broadleaf Willow
S. herbacea L.	Wideleaf Dwarf Willow
S. humilis Marsh.	Small Pussy Willow
S. jejuna Fern.	Belle Isle Dwarf Willow
S. laurentiana Fern.	Quebec Willow (Labr.)
S. leiolepis Fern.	Smooth-scaled Willow
S. lucida Muhl.	Shining Willow
S. myrtillifolia Anderss.	Myrtleleaf Willow
S. pedicellaris Pursh	Bog Willow
S. pedunculata Fern.	Peduncled Willow
S. pellita Anderss.	Ontario Willow
S. planifolia Pursh	Flatleaf Willow

S. pyrifolia Anderss.	Balsam Willow
S. reticulata L.	Netvein Dwarf Willow
S. richardsoni Hook.	Richardson's Willow (Labr.)
S. rigida Muhl.	Rigid Willow
S. serissima (Bailey) Fern.	Autumn Willow
S. uva-ursi Pursh	Bearberry Dwarf Willow
S. vestita Pursh	Roundleaf Willow
S. X *waghornei* Rydb.	Waghorn's Willow (*S. arctica* X *S. cordifolia*)
S. wiegandii Fern.	Wiegand's Dwarf Willow

MYRICACEAE — WAX-MYRTLE FAMILY

Myrica gale L.	Sweet Gale, Bog Myrtle
M. pensylvanica Loisel.	Bayberry

CORYLACEAE — HAZEL FAMILY

Alnus crispa (Ait.) Pursh	Mountain Alder
A. rugosa (Du Roi) Spreng.	Speckled Alder
Betula borealis Spach	Northern Birch
B. cordifolia Regel	Mountain White Birch
B. glandulosa Michx.	Tunda Dwarf Birch
B. lutea Michx. f.	Yellow Birch
B. michauxii Spach	Newfoundland Dwarf Birch
B. minor (Tuckerm.) Fern.	Dwarf White Birch
B. papyrifera Marsh.	White Birch
B. pumila L.	Swamp Birch
Corylus cornuta Marsh.	Beaked Hazelnut

LORANTHACEAE — MISTLETOE FAMILY

Arceuthobium pusillum Peck	Dwarf Mistletoe

SAXIFRAGACEAE — SAXIFRAGE FAMILY

Ribes glandulosum Grauer	Skunk Currant
R. hirtellum Michx.	Smooth Gooseberry
R. lacustre (Pers.) Poir.	Bristly Black Currant
R. triste Pallas	Swampy Red Currant

ROSACEAE — ROSE FAMILY

Amelanchier bartramiana (Taush) Roemer	Bartram's Chuckley-pear
A. fernaldii Wiegand	Fernald's Chuckley-pear
A. intermedia Spach	Swamp Chuckley-pear
A. laevis Wiegand	Smooth Chuckley-pear
A. stolonifera Wiegand	Running Chuckley-pear
A. wiegandii Nielsen	Wiegand's Chuckley-pear
Aronia arbutifolia (L.) Ell.	Red Chokeberry
A. melanocarpa (Michx.) Ell.	Black Chokeberry
A. prunifolia (Marsh.) Rehder	Purple Chokeberry
Crataegus brunetiana Sarg.	Brunet's Hawthorn
C. chrysocarpa Ashe	Golden-fruited Hawthorn
C. macrosperma Ashe	Large-seeded Hawthorn
C. pruinosa (Wedl.) K. Koch	Frosted Hawthorn

Dryas drummondii Richards.	Toothleaf Mountain Avens
D. integrifolia Vahl	Smoothleaf Mountain Avens
D. X *lewinii* Rouleau	Lewin's Mountain Avens
Potentilla fruticosa L.	Shrubby Cinquefoil
Prunus pensylvanica L.f.	Pin Cherry
P. virginiana L.	Choke Cherry
Rosa nitida Willd.	Northeastern Rose
R. virginiana Mill.	Virginian Rose
Rubus canadensis L.	Smooth Blackberry
R. elegantulus Blanch.	Neat Blackberry
R. idaeus L.	Red Raspberry
R. kennedyanus Fern.	Kennedy's Blackberry
R. pensilvanicus Poir.	Pennsylvanian Blackberry
R. recurvicaulis Blanch.	Recurved Blackberry
R. ulterior Bailey	Blackberry
R. vermontanus Blanch	Vermont Blackberry
Sorbus americana Marsh.	American Mountain-Ash, Dogberry
S. decora (Sarg.) Schneid.	Showy Mountain-Ash, Dogberry
Spiraea latifolia (Ait.) Borkh.	Meadowsweet

EMPETRACEAE — CROWBERRY FAMILY

Empetrum atropurpureum Fern. & Wieg.	Purple Crowberry
E. eamesii Fern. & Wieg.	Pink Crowberry
E. nigrum L.	Black Crowberry

AQUIFOLIACEAE — HOLLY FAMILY

Ilex verticillata (L.) Gray	Winterberry Holly
Nemopanthus mucronata (L.) Trel.	Mountain-Holly

ACERACEAE — MAPLE FAMILY

Acer rubrum L.	Red Maple
A. spicatum Lam.	Mountain Maple

RHAMNACEAE — BUCKTHORN FAMILY

Rhamnus alnifolia L'Her.	Alder-leaved Buckthorn

CISTACEAE — ROCKROSE FAMILY

Hudsonia ericoides L.	Golden Heather
H. tomentosa Nutt.	Beach Heather (Labr.)

ELAEAGNACEAE — OLEASTER FAMILY

Shepherdia canadensis (L.) Nutt.	Soapberry

CORNACEAE — DOGWOOD FAMILY

Cornus alternifolia L.f.	Alternate-leaved Dogwood
C. stolonifera Michx.	Red Osier Dogwood

ERICACEAE — HEATH FAMILY

Andromeda glaucophylla Link	Bog Rosemary
A. polifolia L.	Northern Bog Rosemary (Labr.)
Arctostaphylos alpina (L.) Spreng.	Alpine Bearberry

A. rubra (Rehder & Wilson) Fern.	Red Bearberry
A. uva-ursi (L.) Spreng.	Evergreen Bearberry
Cassiope hypnoides (L.) D. Don	Moss Heather
C. tetragona (L.) D. Don	Arctic White-Heather (Labr.)
Chamaedaphne calyculata (L.) Moench	Leatherleaf
Epigaea repens L.	Trailing Arbutus
Gaultheria hispidula (L.) Bigel.	Creeping Snowberry
G. procumbens L.	Wintergreen
Gaylussacia baccata (Wang.) K. Koch	Black Huckleberry
G. dumosa (Andr.) T. & G.	Dwarf Huckleberry
Kalmia angustifolia L.	Lambkill, Sheep Laurel
K. polifolia Wang.	Bog Laurel
Ledum groenlandicum Oeder	Labrador Tea
L. palustre L.	Northern Labrador Tea (Labr.)
Loiseleuria procumbens (L.) Desv.	Alpine Azalea
Phyllodoce caerulea (L.) Bab.	Mountain Heath
Rhododendron canadense (L.) Torr.	Rhodora
R. lapponicum (L.) Wahlenb.	Lapland Rosebay
Vaccinium angustifolium Ait.	Low Sweet Blueberry
V. boreale Hall and Aalders	Northern Dwarf Blueberry
V. cespitosum Michx.	Dwarf Bilberry
V. macrocarpon Ait.	Large Cranberry
V. myrtilloides Michx.	Velvet-leaf Blueberry
V. nubigenum Fern.	Newfoundland Bilberry
V. ovalifolium Sm.	Oval-leaved Bilberry
V. oxycoccus L.	Small Cranberry, Marshberry
V. uliginosum L.	Tundra Bilberry
V. vitis-idaea L.	Partridgeberry

DIAPENSIACEAE — DIAPENSIA FAMILY

Diapensia lapponica L.	Diapensia

OLEACEAE — OLIVE FAMILY

Fraxinus nigra Marsh.	Black Ash

RUBIACEAE — MADDER FAMILY

Mitchella repens L.	Two-eyed Berry

CAPRIFOLIACEAE — HONEYSUCKLE FAMILY

Diervilla lonicera Mill.	Northern Bush Honeysuckle
Linnaea borealis L.	Twinflower
Lonicera villosa (Michx.) R. & S.	Northern Honeysuckle
Sambucus pubens Michx.	Red Elderberry
Viburnum cassinoides L.	Northern Wild-raisin, Witherod
V. edule (Michx.) Raf.	Squashberry
V. trilobum Marsh.	Highbush Cranberry

APPENDIX B
ILLUSTRATED GLOSSARY

SIMPLE

PINNATELY COMPOUND

PALMATELY COMPOUND

ALTERNATE

OPPOSITE

WHORLED

LINEAR

LANCE-SHAPED

OBLONG

ELLIPTIC

OVAL

TRUNCATE

EGG-SHAPED

HEART-SHAPED

SPATULA-SHAPED

LOBED

ENTIRE

COARSE-TOOTHED

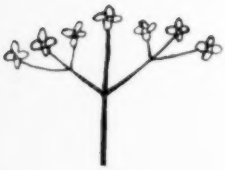
FINE-TOOTHED

DOUBLE-TOOTHED

REVOLUTE

UMBEL

CORYMB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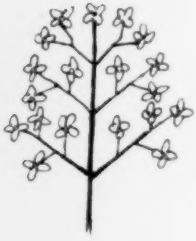
RACEME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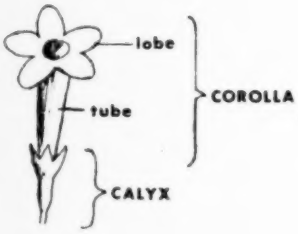
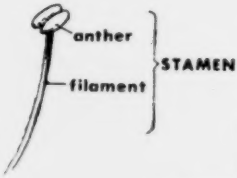
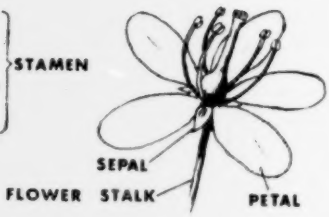
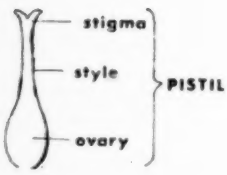
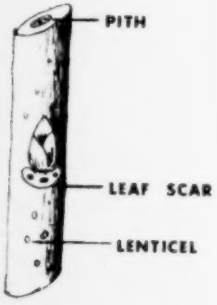

lobe
tube
COROLLA
CALYX

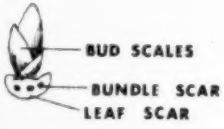

anther
filament
STAMEN


SEPAL
FLOWER STALK
PETAL


stigma
style
ovary
PISTIL

TERMINAL BUD
LEAF AXIL
LATERAL BUD


PITH
LEAF SCAR
LENTICEL


BUD SCALES
BUNDLE SCAR
LEAF SCAR

SPUR BRANCH

APPENDIX C
GLOSSARY

Achene. A small, dry and hard, 1-celled, 1-seeded fruit.
Alternate. Not opposite, the leaves or buds occurring singly at different levels on the twig.
Anther. The pollen bearing portion of the stamen.
Ascending. Growing upwards at an angle.
Axil. The upper angle that a leaf makes with a stem, or that a lateral vein makes with the median vein of a leaf.

Berry. A fleshy fruit usually containing many small seeds.
Blade. The expanded portion of a leaf.
Bloom (of twig, leaf, fruit). A whitish or bluish powdery coating or, in the case of the conifers, caused by rows of stomata.
Bract. A small scale-like leaf associated with a flower cluster.
Bractlet. A small or secondary bract at the base of a flower or on a flower stalk.
Bristle. A stiff hair.
Bud. An underdeveloped leafy stem, flower or flower cluster protected by scales.
Bud scales. Thin, sheet-like protective coverings of the buds.
Bundle scars. Tiny dots or lines on the surface of the leaf scar marking the points where veins passed from the stem into the leafstalk.

Calyx. The outermost part of the flower, usually green, and composed of sepals that are fused or free.
Calyx-lobes. Projecting parts or segments of the calyx remaining at the apex of a fruit.
Canes. A term often used in describing the stems of raspberries, blackberries, and roses.
Capsule. A dry fruit that splits along two or more lines when mature.
Catkin. A scaly-bracted cluster or spike of flowers, usually having flowers of only one sex.
Compound leaf. A leaf divided into 2 or more distinct leaflets and attached by one leafstalk.
Conduplicate. Folded lengthwise along the middle.
Corolla. The inner whorl of flower envelopes, composed of petals that are fused or free.
Corymb. A convex or flat-topped flower cluster, not arising from one point, with the outer flower opening first.
Crown (of a tree). The upper portion of a tree including the branches and foliage.
Cyme. A convex or flat-topped flower cluster, the central flowers opening first.

Deciduous. Refers to plants that lose their leaves in the autumn.
Double-toothed. Having large teeth which in turn have smaller teeth on them.

Drupe. A fleshy fruit with the seed enclosed in a hard and bony stone.
Drupelet. A small drupe, several of them forming an aggregate fruit as in raspberries and blackberries.

Elliptic. Widest in the middle and tapering evenly to both ends.
Entire. Refers to a leaf margin without teeth.
Evergreen. With the leaves remaining more or less green throughout the winter.

Filament. The part of a stamen supporting the anther.
Film (on twigs). Thin coating, usually white or grayish in color, that gradually wears off the twig.
Form. Refers to the minor variations occurring among individuals of a population.

Genus. A group of related species.

Heart-shaped. Like a valentine heart with the point at the leaf apex (usually referred to as being cordate).
Hips. A name often used for the fruit of the roses.
Host. A plant infected by a parasite.
Hybrid. The offspring of a cross between two species.

Imbricate. Overlapping, either vertically or spirally, like shingles on a roof.

Lanceolate. Lance-shaped, considerably longer than broad, broadest below or about the middle, tapering upwards.
Lateral (bud). On the side of the twig rather than at the end.
Leaflet. One of the divisions of a compound leaf.
Leaf scar. The mark left on a twig at the point of attachment of a fallen leaf, often crescent-shaped.
Leafstalk. The stalk supporting a leaf.
Lenticel. Small corky spots which appear as dots or warts on a twig.
Linear. Long and narrow with parallel margins.

Needle. A name often used for the leaves of conifers.
Needle-like. Very slender and pointed at the tip.
Net-veined. With the veins in the form of a network.
Nut. A 1-seeded hard and bony fruit.
Nutlet. A small nut.

Oblong. Two or three times longer than broad and with nearly parallel sides.
Opposite. Two buds or leaves at the same level on a stem; paired, on opposite sides.
Oval. Broadly elliptical.
Ovate. Egg-shaped, broader near the base than at the tip.
Ovoid. A solid with an egg-shaped outline.

Palmately compound. A compound leaf with the leaflets radiating from a point like the spokes of a wheel.
Palmately veined. Having the main veins radiating outwards from a central point.
Panicle. A branched flower cluster, each branch of which is similar to a raceme.

Parasite. A plant living on another plant (the host) from which it obtains its food.
Peduncle. A stalk supporting either a single flower or a cluster of flowers.
Perfect flower. A flower that bears both stamens and pistil.
Petal. One of the segments of the corolla, usually colored.
Pinnately compound. The leaflets of a compound leaf placed on either side of an axis.
Pistil. The seed-bearing organ of the flower composed of an ovary, style and stigma.
Pith. The spongy or hollow center of a twig.
Pome. The fleshy fruit of the apple family, derived from a compound ovary.
Prickle. A stiff, sharp and slender outgrowth on a stem.

Raceme. A simple flower cluster with the flower stalks arising from one axis.
Receptacle. The enlarged end of the flower stalk bearing the floral organs.
Revolute. The margins rolled towards the lower side.

Samara. A dry, 1-seeded, winged fruit, such as that of the maples.
Scales (leaf, twig). Thin, dry, flake-like surface material.
Scurfy. Covered with scale-like or bran-like particles.
Sepal. One of the segments of the calyx, usually green.
Simple leaf. A leaf not divided into separate leaflets, though it may be lobed.
Spatula-shaped. With a broad rounded end and narrowing to the base.
Species (singular). A group of individuals that have the greatest mutual resemblance and that freely interbreed.
Spur branch. A stubby branchlet with densely crowded leaves and leaf scars.
Stamen. Male flower structure bearing the pollen.
Stigma. The part of the pistil that receives the pollen for fertilization.
Stipule. A leaf-like structure at the base of a leafstalk, usually paired.
Stomata. Breathing pores or apertures in the epidermis of a leaf.
Style. Elongated part of the pistil between the ovary and the stigma.

Terminal. At the tip of a stem or branch.
Thorn. A sharp woody outgrowth of a stem.
Toothed. Provided with teeth or small projections along the edge.
Truncate. Ending abruptly as if cut off.
Twig. A small shoot representing the growth of the previous season.

Umbel. A flat or convex flower cluster with all the flower stalks arising from one point.

Variety. Refers to a group that differs from other individuals in the same species.

Whorled. Having parts placed in threes or more at the same level on a stem.
Woolly. Bearing hairs that are curled or more or less matted.

APPENDIX D
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